



**DELHI UNIVERSITY
LIBRARY**

DELHI UNIVERSITY LIBRARY

Cl. No. २१६२ ५३.४.११४

Ac. No. २०२१२

Date of Return or Loan

This book should be returned on or before the date last stamped below. An overdue charge of 5 Paise will be collected for each day the book is kept overtime.

ACRES AND PEOPLE

Acres and People

The Eternal Problem of China and India

by

EARLFY VERNON WILCOX, PH.D., LL.D.

ILLUSTRATED



NEW YORK

ORANGE JUDD PUBLISHING COMPANY, INC

1947

COPYRIGHT, 1917, BY
ORANGE JUDD PUBLISHING COMPANY, INC.

— — — — —
PRINTED IN THE UNITED STATES OF AMERICA

This book or any part thereof, may not be
reproduced without permission of the publishers,
except by a reviewer who wishes to quote brief
passages in connection with a review written for
inclusion in a magazine or newspaper

Copyright under the Articles of the Copyright Convention of the
Pan-American Republics and the United States, August 11, 1910

CONTENTS

CHAPTER	PAGE
I. OUR ASIATIC FARM NEIGHBORS	15
II. RELIGION AND DAILY LIFE	42
III. EFFECTS OF THE CASTE SYSTEM	63
IV. SANITARY CONDITIONS AND DISEASES	87
V. ILLITERACY AND EDUCATION	102
VI. SOILS AND THEIR PRESERVATION	123
VII. HAND LABOR AND FARM MACHINERY	145
VIII. THE VILLAGE SYSTEM	166
IX. FOOD AND PLANTATION CROPS	186
X. FAMINES AND FOOD DISTRIBUTION	211
XI. POST-WAR TRADE WITH CHINA AND INDIA	232
XII. POLITICAL AND RELIGIOUS DISSENSIONS	249
XIII. INDEPENDENCE AND NATIONAL STABILITY	263
XIV. WHERE EAST MEETS WEST	282

ILLUSTRATIONS

	PAGE
Spinning cotton in China	17
Chinese immigrants for Manchuria	19
Street peddlers in China	21
Immigrants in Harbin	25
Milking a Brahman cow	29
Typical bullock cart, India	32
Red Scindi cow, India	34
Queens Golden Monastery, Mandelay	39
Buddist temple in China	45
Incense burner in Peiping	49
Chinese architecture	57
Carrying dung cakes in India	65
Pedestrian bridge in China	69
Grinding kaoliang in China	77
Houseboats at Shanghai	85
Gathering dung for fuel in India	93
Picking cotton in India	117
Cowhide bucket for irrigation well in India	125
Private irrigation well in India	130
Plowing with crooked stick in India	137
Plowing under sunn hemp in India	141
Harvesting wheat near Shanghai	147
Men and women loading coal in India	149

ILLUSTRATIONS

	PAGE
Mowing with buffalo, China	151
Marketing peanuts in China	156
Wuaowing wheat in China	158
Grinding wheat in China	161
Wool wheeled 90 miles to market in Manchuria	164
Typical farm village in India	167
Loading luggage in China	172
Village blacksmith in China	179
Marketing persimmons in China	187
Making syrup from palm juice, India	191
Hauling soybeans in China	195
Barge load of soybeans, Manchuria	199
Carrying peanuts in China	201
Desert travel in Manchuria	209
Soybean storage, China	212
Native humped cattle, China	218
Native humped cattle, China	221
Dairy buffalo, India	226
Hindu tobacco market	229
Baled cotton in India	235
Soybean cakes in Manchuria	239
Camel train in North China	243

PREFACE

In the crowded populations of southeastern Asia the problem of producing and distributing food to her teeming millions assumes a compelling urgency beyond the imagination of those who have not traveled in that region. How to adjust a constantly growing population to a rather rigidly fixed area of crop land seems on the face of it an impossible task. Perhaps it cannot be done in any simple, painless manner. Where a considerable percentage of the people already have one foot over the threshold of starvation there are obviously too many hungry mouths for the limited number of productive acres. India's food supply is sufficient for only about three quarters of her inhabitants. Famine is a perpetual visitor. Deaths by actual starvation occur daily. And the situation is not much better in China.

In this volume I have considered the question of balancing acres and people. All the factors concerned with a possible solution of the problem are discussed from that point of view. Religious tabus, political experiments, illiteracy, disease, lack of sanitation, handicaps of climate, poverty, high birth rate—all seem connected together by some

sinister bond and conduce to famine and distress.

Many American travelers in the Orient, probably a majority, look upon the Indian situation as extremely depressing and almost hopeless. Times without number I have heard the view expressed that nothing can be done about it except to allow the death rate to catch up with the birth rate. I have tried to treat that phase of the subject in an unprejudiced and unemotional mood, making it possible, I hope, for the reader to draw a picture of the oriental problem that is somewhere near reality.

While the East and West may not meet in an intimate understanding of each other's racial peculiarities, our trade relations will doubtless assume ever-increasing volume and variety in the years to come. On that point I hope I may be pardoned for having editorialized a bit here and there in the text. Half the population of the globe cannot safely be disregarded as a far-off indifferent feature of the world life. In the supply of daily necessities neither Kansas, nor Michigan nor Virginia are very far from India and China. The lack of ships to carry India's jute caused a flurry throughout the United States and without tung oil from China we were in a quandary about paint supplies.

From a purely selfish standpoint there may be

great profit in cultivating more intimate relations with the Orient. The Chinese and Hindus have been emigrating for 1500 years or more. In Malaya, Dutch East Indies, Thailand, Indo-China, Burma and the Philippines there are over 5,000,000 persons with Chinese blood. Chinese are the most sturdy, thrifty, and industrious of all the competing races. In whatever part of Asia or Africa we go in search of trade we shall come into contact with Chinese, Hindus and Moslems. It's abundantly worth while to know them better. Such closer approach may make for trade and especially for a more solid foundation of world peace and friendly understanding.

On many phases of the problem of balancing acres and people I have merely hinted in this short discussion at its difficulties and intricacies. Whether the reader agrees or disagrees with the conclusion I hope he may be induced to look further into the matter for himself. A serious study of the Orient in relation to the United States will pay for his time and effort.

The interested reader may find a wealth of detailed information on conditions in India and China by consulting the Report of the Royal Commission on Agriculture in India in 15 volumes, and the China Yearbooks. Reference librarians may be depended upon as guides to the

huge mass of technical and popular literature relating to India, China and the Philippines.

The present volume is based on extensive travel through all the far east, especially China and India, interviews with scores of Indians, Chinese and travelers who had made a study of conditions in those countries and perusal of current official reports issuing from India and China. Credit is given in the text with gratitude for many suggestions received from the staff of Foreign Agricultural Relations and others in the United States Department of Agriculture.

We are under special obligation to give sympathetic heed to the Philippines. The Filipinos stood valiantly by us in the recent world conflict. Our long standing specific pledge of independence for them on July 4 can't be overlooked. They suffered almost beyond imagination during the war. Their agriculture and industry are in as discouraging a state of ruin as is any part of Europe. It is difficult for the sugar consumers of the U. S. to understand the reason for reducing imports of sugar from the Philippines. Is it just a case of not that we love the Philippines less but that we love Cuba more? It is the plain duty of America to stand by the Philippines during these trying times of their adventure as a republic.

The political confusion in China and India

since peace (or is it truce?) was established is beyond a clear understanding. Observers in China report that the Chinese are not evincing much skill in organizing the necessary machinery of peace. Nor in India is the domestic situation improving. There is no unanimity of reaction even to the British offer of independence in or outside the British Empire. The age old problem of balancing acres and people takes precedence of all political flurries and requires solution by co-operative effort of the hungry millions in China and India.

In developing this discussion of the problems of acres and people I have had the courteous and kindly assistance, as on previous occasions, of Mr. George E. Eiermann, President of the Orange Judd Publishing Company.

E. V. WILCOX

Acres and People

I

OUR ASIATIC FARM NEIGHBORS

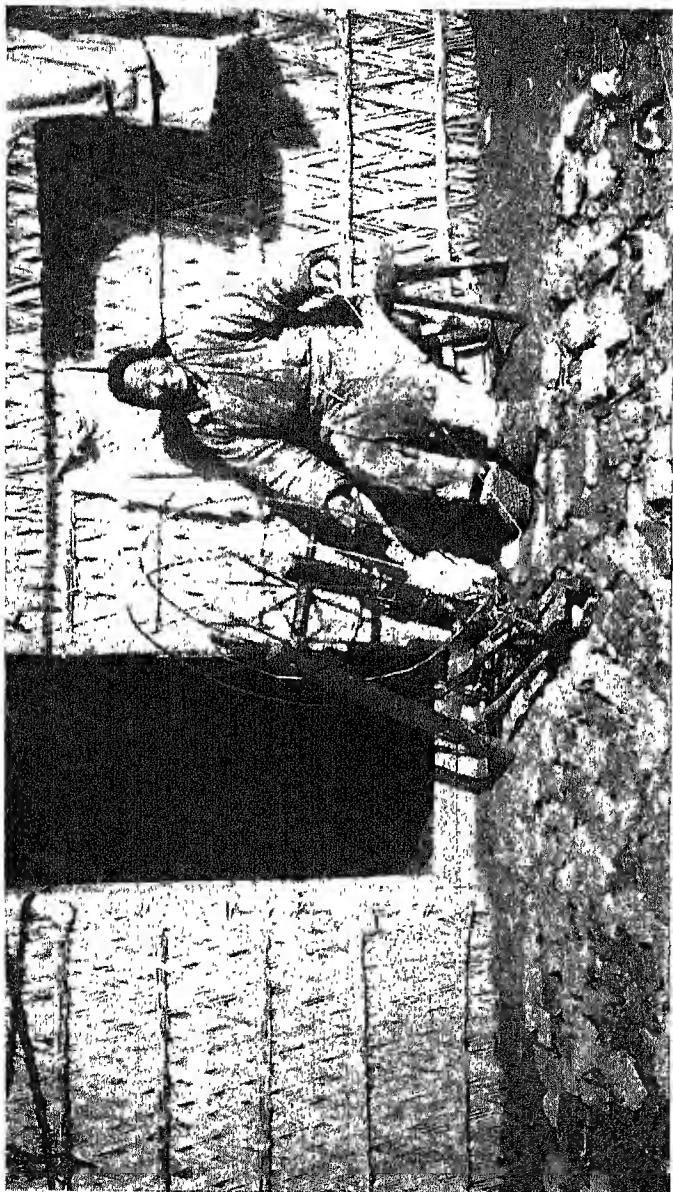
The changeless East is beginning to stir. With an unbroken history behind them of more than 40 centuries of the ceaseless round of rebirth and yearly alternation of crop seasons, 750,000,000 farmers in China and India, most of them illiterate, are asking questions about what is going on in the rest of the world. How large is the world? What are other people like? How do they live? Are they naked and starving? These farmers whose radius of travel is ten miles or less are learning to read and write, millions of them, especially in China. Knowledge thus gained is exciting, intoxicating, with a vista of almost unbelievable scenes. These newly awakened sleepers behold with ecstasy how much of the world has sped on by on wings of airplanes, leaving them still creeping along at the snail's pace of oxen.

Will they, like children at sight of painted tops, stretch out eager hands for motor cars, radios, re-

frigerators, telephones, books and magazines? Will they forget the eternal values of their ancestral culture for the mere frills of our modernity? Whatever use they may choose to make of this great eye-opening adventure, from now forward what they do will gain new importance to us with every day. When East meets West shall we be friends or rivals? At any rate it is high time that we begin earnestly studying the East. Both sides may learn something of lasting value.

Nearly half the population of the globe live in China and India, occupying about ten percent of the earth's land area. The historical records of these peoples run back 4,000 years or more. Widely believed traditions entice the investigator much further into the dim past of the human race among the dust heaps of forgotten ages in which man was learning how to adapt his body and mind to his environment.

The struggles of these peoples for 40 centuries and more have resulted in many customs and practices which have come down through the years with surprisingly little change. The wisdoms of life thus acquired may be worth study by the other half of the world's population. The purpose of this volume is to discuss briefly what we, that other half, may learn from the life experience of these two great nations. Until we understand the condi-

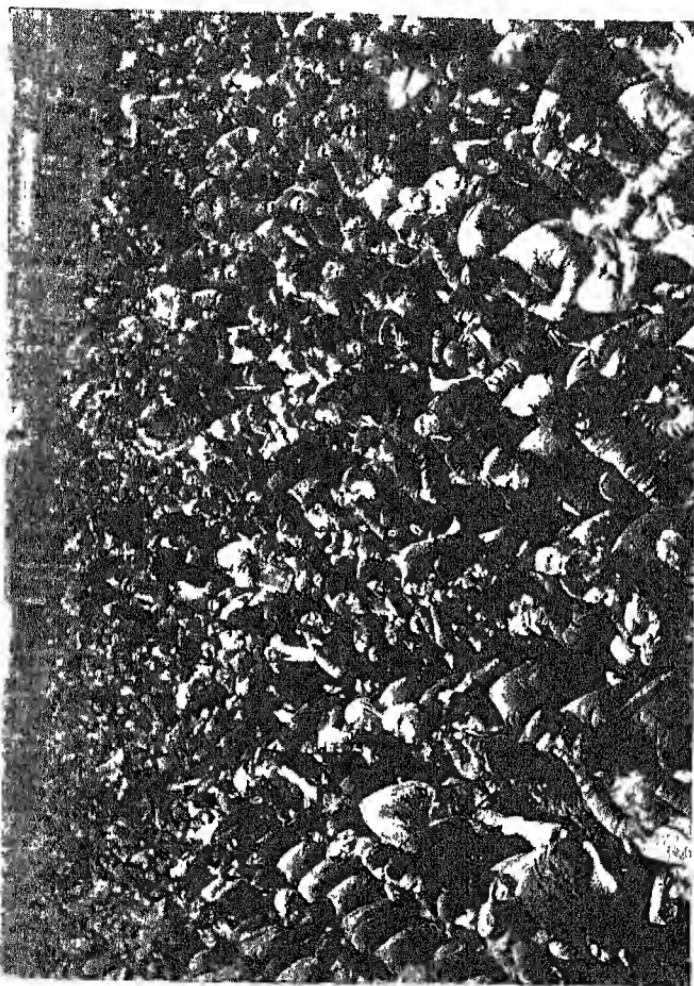


SPINNING COTTON IN CHINA

tions which they must meet, and have met, in order to live at all, we shall be in no position to pose as teachers of a better way of life for these peoples

At the very start in all modesty we should remember that we are dealing with an immense body of experience, tried and tested in the fiery furnace of 40 centuries. Since 2000 B.C. the Chinese have had domesticated oxen, sheep, goats, pigs, horses and dogs. During all this time, too, they have cultivated wheat and millet. Our breed associations and plant geneticists sometimes speak as if they were reaching pretty far into antiquity if they can trace the pedigree of a sheep or potato for 75 years. Chinese silk has been standard since 1500 B.C. By 500 B.C. the Chinese were embarked on the culture of soy beans, and now have 1800 or more varieties of this staple legume, the keystone in the diet of the most sturdy race on earth.

The Chinese have used coal since 500 A.D. Marco Polo in 1280 A.D. records his amazement at the possibility of using "black stones" to produce heat. Since 875 A.D. the Chinese have had calendars and printed books. The Yung-lo ta tien manuscripts, prepared during the years 1403 to 1407 A.D. ran into 11,095 volumes, mentioned by Dr. W. T. Swingle as "a universal compendium of all existing Chinese history, ethics, science, art,



CHINESE IMMIGRANTS FOR MANCHURIA

geography, religion, in a word of all human knowledge among the Chinese up to 1400 A.D."

Since 1200 A.D. the Chinese have known the value of chaulmoogra oil for the treatment of leprosy and of ephedrine for the relief of nasal catarrh. An enormous garden for experiments with plants that could serve as emergency food in time of flood or drouth was established in 1382. A modern touch is given to Chinese antiquity by contemporary descriptions and wood cuts of Chinese women riding astride in polo games in 600 A.D.

To the west and south of China lies India, the frontier of their common borders stretching more than 1800 miles. For 2000 years there has been no conflict between them. No armed invasion from either side has crossed this vague, unsurveyed and unpoliced line. But we boast of 300 years of peace between United States and Canada.

Both China and India have had internal convulsions, civil wars and lesser political disturbances. Both have been overrun and temporarily conquered by wandering hordes of Mongols and other races. But ultimately the invaders have been assimilated into the native population without greatly changing the essential ethos of the people. Out of each period of stress and confusion the eternal India and China have emerged intact.

And while in each country the human racial

elements which have entered into the composition of the present inhabitants of China and India came as rolling waves of immigrants from the brooding mother lands of Western Asia by way of the Gobi or Persian deserts, and drove out or amalgamated with the primitive aborigines, these synthetic racial products in the China and India of today differ physically and mentally in many respects. The description of this maze of human types, however, would lead into the endless controversies of anthropological research, and space in this chapter must be reserved for a rough sketch of life in modern China and India with special accent on the rural villages.

The village is the characteristic social and political unit in India and China. Not over eight percent of the Chinese live in cities while there are more than a million rural villages mostly of a few hundred inhabitants each. In India where nearly 90 percent of the people are rural there are 700,000 villages of peasants and laborers in local cottage industries. The future of both these Asiatic countries lies in the laps of their peasantry. I can not pretend to cast a horoscope for 750,000,000 farmers, but their status is certain to change either gradually and in an orderly evolution or by some violent upheaval with inevitable reverberations throughout the civilized world.

Let me try to picture the life of an ordinary peasant family as I saw it in these countries. The first shall be of a village located about 25 miles from Shanghai, China. No roadway or canal reached the place. Freight and passenger traffic was by way of wheelbarrow paths leading to the nearest highway. The farmers wheeled their pigs and other produce to market in barrows or carried their burdens slung from bamboo shoulder poles. A new significance of the old cowboy phrase "hog-tied" came to mind as I saw pigs up to 100 pounds in weight so securely bound in a net of cords that the animal could scarcely squeal, to say nothing of moving legs or ears. Two men trudged along the path toting a fat pig suspended from a pole resting on their shoulders.

In this particular village the farmers had only two miles to go to market. Farther west in Szechwan when the pig or other produce went to market the journey might require two days or longer over a bumpy wheelbarrow trail, sometimes with the wife riding atop a sack of beans, and sometimes herself pushing the barrow.

But it was the system of soil culture that interested me most deeply. The first thing to catch my eye was the orderly distribution of little heaps of compost and corresponding piles of the roots and stubble of wheat in a field that had recently been



STREET PEDDLERS IN CHINA

harvested. Each farm must produce food and fuel for the family. The roots and stubble of wheat and the roots and stalks of cotton are not considered of sufficient fertilizer value to be left in the soil. They are therefore pulled up and dried for fuel to be used in the home-made baked-earth barrel-like stoves. And the housewives assured me that such material is convenient and quite adequate for the purpose.

So far no possible waste or misuse of the crop was to be seen. The grain went into bread or was sold. The chaff and straw were combined with other material for compost. The roots and stubble became fuel, and with only negligible loss of humus to the soil.

Next came the fertilizer side of the equation for maintaining the proper content of plant food in the soil. Every shred of green or succulent plant substance not used for human food and not consumed by the pigs or chickens was thrown into pits and mixed with ashes and also every vestige of solid or liquid human or animal excretions, there to become a compost of high efficiency. The liquid portion of the final residue was dipped from the pits and poured along the rows of wheat or other crops, while from wells or pools water was carried by hand to be distributed on the small fields in dry weather.



IMMIGRANTS IN HARBIN

A pig or two and a small flock of chickens were expected to be smart and active enough to pick up a living from odds and ends that escaped human notice. Here and there a farmer might keep a few sheep confined in a shed, where it was the children's task to feed them such weeds and grass as could be garnered from nearby burial mounds and the sides of wheelbarrow paths.

Under such a system a man and wife, two to four children and perhaps a grandparent had the problem of obtaining a living from five acres of land or less, and except in times of drouth they have solved the problem. I never saw more sturdy little b'vies of children about the huts of these farmers, with perky posture, ruddy cheeks and pudgy hands, bundled up in China-blue cotton garments, thickly padded for cold weather with home-grown, home-ginned cotton lint. Huts made of rammed earth reinforced with stalks of kaoliang last forever and a day.

Soybeans cooked and prepared in an almost infinite variety of ways, supplemented with an occasional crab or small fish, now and then an egg or chicken and mixed by a few deft strokes of a pair of chop sticks with green vegetables and rice, account for the ruddy-cheeked urchins and the phenomenal physical endurance of the Chinese farmer.

For comparison I turn to the land-holding of a Hindu peasant or ryot near Allahabad on the Jumma River. This ryot also cultivated about five acres of land, but, unlike that of the Chinese peasant, his land was in six fragments, no two of the fragments adjoining each other. By the Hindu laws of inheritance each son receives an equal share of the father's land-holding, not merely an equal share of the total, but an equal share of each piece. This ryot's holdings were already so fragmented and so widely separated that it required an hour's time merely to visit the six pieces. The process of progressive fragmentation goes on till it results in microscopic farms, so small and irregular as not to permit of economic operation. They are too much like toy gardens or bits of victory gardens in a suburban yard.

A second point that can't escape the attention of the observer is that while in China there are land areas which have borne a narrow rotation of crops for 40 centuries with undiminished soil fertility, the productivity of much of the crop land of India has gradually declined to an irreducible minimum, with yields about half those of most other countries.

Some of this tremendous loss of plant food from the soil may be due to leaching during the heavy rains of the monsoon period, and to excessive

oxidation from the heat of the sun in the long dry season of every year. But a still greater loss must be attributed to the age-old practice of burning cattle dung for fuel. The practice seems not only wasteful but repulsive. I could not reconcile my thinking with the usual arguments in favor of burning dung. The Royal Commission on Agriculture in India strongly deprecated this custom and similar efforts have come from various other investigators, but so far without much tangible result.

Women and children busy themselves collecting the fresh, soft dung, patting it with the hands into flat cakes about 6 inches in diameter and plastering them against the sides of the hut or roadside trees, where they are left to dry. Commonly this practice is attributed to lack of available fire wood. But there is a definite preference for cattle manure because it burns more slowly than wood. In many places dung is used for fuel where wood is abundant, notably so in the large Hindu population of southern Burma. Where wood and coal cost too much, cotton stalks, bean stalks, grain stubble, pigeon pea stems, pith of jute and sunn hemp or sugar cane bagasse could be used much more than at present. No improvement in this regard has occurred in the past 50 years. Ordinarily no attempt, except occasionally in the Punjab, has



MILKING A BRAHMAN COW, INDIA

been made to save the dung or urine of cattle in pits or otherwise. And it should be remembered that India has a larger cattle population (brahman and buffalo) than any other country, and that large quantities of vegetable material go to waste which could be composted into a product almost equal to dung.

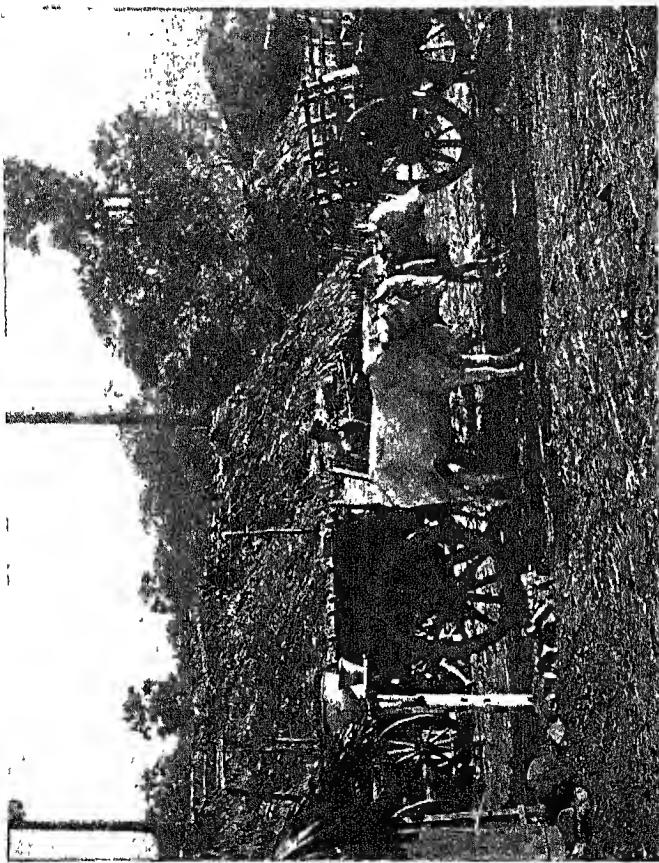
The ryots of India are permitting cattle and buffaloes to multiply far beyond the carrying capacity of the pasture land, and, as a result, their livestock are steadily encroaching on land desperately needed for the production of human food. There are 160,000,000 brahman cattle in India and 40,000,000 buffaloes. The cow is considered an embodiment of the goddess Bhagavati and the peasant rates it a religious duty to feed her even if he goes hungry himself.

This zebu or Indian bovine at its best is a top-notch ox, powerful as an elephant, calm and easily maintained. As seen in the region of Bombay he is an ideal draft animal. But more commonly he is indeed a miserable creature. One informant described the cattle near Calcutta as "diminutive in size, shriveled in limbs and reduced to skeletons." In strolling about the countryside near Allahabad I learned that the draft cattle could work only one day a week and required the remaining six days of the week to recover sufficient

strength, from foraging on such grass and weeds as they could find, to do another day's work. I inquired why so many wretched scrub bulls were allowed to propagate at will, and was informed that it was the wish of the great Brahma, decreed from the beginning of eternity, that man should in no wise interfere in the habits of animals.

I can see little hope for improved soil tillage until a system of breeding and selection is followed, calculated to result in a more efficient draft ox. The present sadly dejected beasts are simply unable to pull modern plows or to turn the soil to a desirable depth. In fact even in the black soil region of Madras adequate plowing may be done only once in four or five years.

Little wonder, therefore, that the Royal Commission reported "In the average village of the Madras Presidency conditions are altogether deplorable. Houses are badly built, devoid of light and ventilation. Verandas and eaves are used as cattle sheds where cattle dung and house refuse accumulate. Few villages have more than one source of water supply, no particular well or tank being reserved for drinking water. Pollution by washing, bathing and by human and animal excrement is universal. Lack of drainage permits the formation of pools in which mosquitoes may breed. Not only does the average ryot fail to ap-

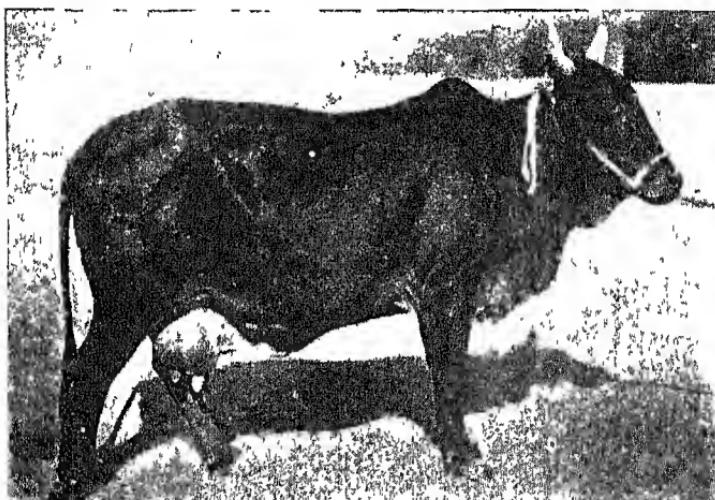


TYPICAL BULLOCK CART, INDIA

preciate the loss of fertility from the use of cow dung as fuel but he strongly opposes the use of night soil as a manure. Hence his fields become poverty stricken and he himself suffers from malaria, hookworm and other diseases."

In discussing these practices of the peasantry a Bengal banker exclaimed "their colossal ignorance is the main cause of their conservatism." But that is a rash oversimplification of the matter. The problem is vastly more complicated. At first blush it would appear that here we have a clear case of the fulfilment of the dire prophecy of Malthus that ultimately the hungry mouths of a steadily increasing population would outrun the utmost possible production of food on the earth's crop lands. True, there have been thousands of famines in both India and China in some of which as many as 20,000,000 of people have died of starvation. A particularly distressing famine occurred in Bengal in 1943. But the problem of adjusting acres to people has many facets. It may look like a hopeless tangle, a vicious circle of cause and effect, operating in an endless sequence of misery after misery. But among the many causes of the poverty and ignorance of the Hindu ryot there may be one that can be removed in such a way as to permit a gradual improvement all along the line.

Merely to enumerate some of these causes may suggest where a hopeful beginning can be made. For example in olden times each village had a great variety of local industries conducted by village artisans. But Manchester piece goods deprived



RED SINDI COW, INDIA

the village weavers of their means of livelihood. Imported cutlery played havoc with the village smith. River steamships destroyed the business of the native boatmen. Extension of the jute areas and of other plantation crops encroached seriously upon the village commons and grazing lands, thereby forcing the farmer to use a little more of

his crop land as pasture for his cattle in order to keep them at least half-nourished and half-capable of doing the necessary farm work. Lack of sufficient grazing land and green fodder lowers the vitality of work oxen and milk animals, making it necessary to maintain a larger number of these weakened creatures to meet minimum requirements. Thus industrial workers deprived of the opportunity of conducting their trades are driven back to the land where they increase the serious pressure of population upon a diminishing crop acreage in a situation where cattle instead of being the servants of man are active competitors for the very means of existence.

The seriousness of the destruction of local cottage industries by foreign competition can not be easily overstressed. "In many localities," testified Sir P. C. Ray, "paddy is the principal crop and mainstay of the people. This crop gives occupation for barely three or four months. The remaining 8 months the ryots are idle. They are hopelessly in debt to the landholder and money-lender. The charka or spinning wheel is the only machinery that furnishes a real home industry throughout the length and breadth of India."

Early Hindu industries catered to a tourist market as well as for home consumption. There was the brassware of Benares, the shawls of Kash-

ini, the damascene of Amritsar, the muslin of Dacca, the silk of Muishidabad. None of these looked to a wide market. Even the early iron and coal industries were localized and the textile and clothing factories were distributed in every rural zone and village. Pondering on this one point in the rural economy of India, T. N. Ramaswamy, a bitter critic of British operations in India argues that "all the troubles of modern India are the consequence of an uncoordinated technical evolution in the past century of British domination. The primal cause of our economic distress is not illiteracy or thriftlessness but the imposition of a competitive system involving cash and an inexorable price structure. With a market which he can neither understand nor influence the farmer becomes fatalistic and despondent." There again we have the case of an angry reformer who would bring sweetness and light into a muddled situation by the simple process of adopting the Soviet system.

One cause of India's agricultural distress must be attributed to the climate of that country. The world over the chief factor in farm production is climate. Plants require water and sunshine, at the right seasons and in proper proportions. Man also is affected by climate. His energies are depressed or heightened according as the weather is

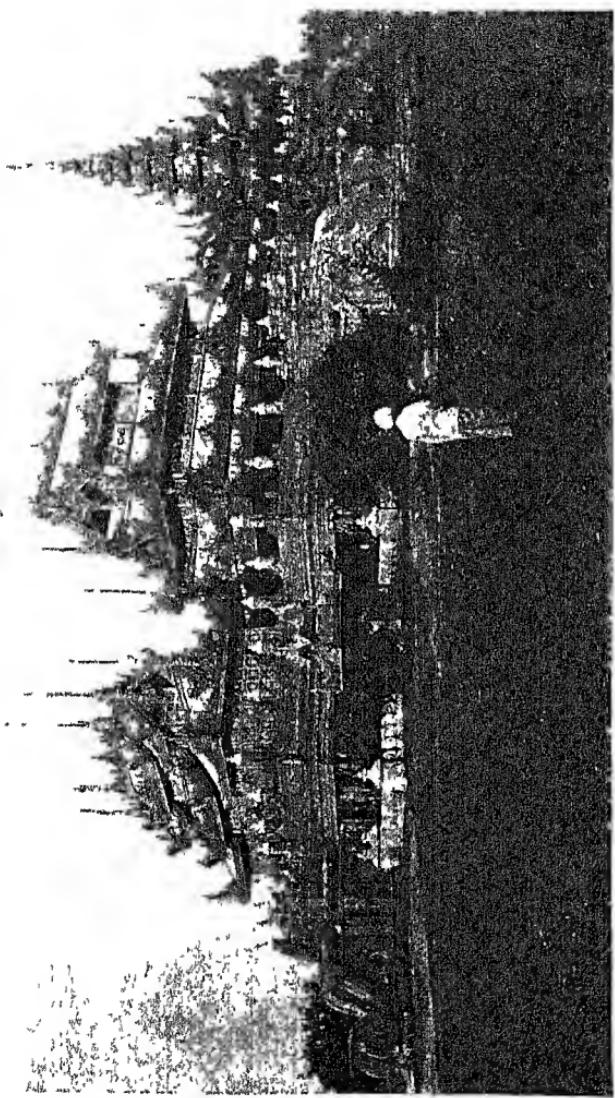
favorable or unfavorable to their development. Neither India nor China possesses ideal climates. The alternating dry and rainy seasons in both countries are severe and extreme. In China the summers are wet and the winters dry. The monsoon rains in India begin early in June and dry weather returns in November. But the rainfall during the growing season is highly variable, ranging from an average of 600 inches a year in Cherrapunji to desert conditions in Northwest India. Long continued droughs have occurred at intervals, apparently connected with sun-spot cycles, and causing frightful famines in some of which several million people have died.

But this alternation of seasons has another effect of large consequence. The nearly six rainless months of each year make farming only a part time occupation except where irrigation water is available. The ryot, therefore, must have some cottage industry profitable enough to eke out a living. The decline of these local handicrafts, their possible revival and their relation to large-scale centralized manufacturing will be discussed when we come to the subject of industrialization. In passing, I might mention the fact that evidence from archaeology indicates that in past ages outstanding periods of unusual flowering of Indian arts, crafts and general prosperity synchronized with cooler,

moister climate than has prevailed for the past few centuries.

What are the facts about the Indian and Chinese populations? Are they static or increasing or declining? Answers to these questions can be only approximately correct. No census figures or even vital statistics can be taken without a grain of salt. Where 80 to 90 percent of the people are illiterate the enumerators and sanitary officials can't always be infallible. No reflection is thereby intended on the native wit of the Hindu. The intellectual capacities of the majority the world over are insufficient for the task of comprehending fully their own interests. How then, can we expect an illiterate ryot, a worshipper of the sacred cow to grasp the theories of Ricardo or Malthus.

Since the first fairly dependable census was taken in India in 1901 the figures have shown an increasing shortage of women who now number 12,000,000 fewer than the men. The ratio at present is 940 females to 1000 males. With a birth rate of 30 to 35 per 1000 total population, and a death rate of 28 it is easy to explain the increase of 50,000,000 in population during the past decade. The crop area has somewhat diminished during the same period. Since life expectancy in India is only 25 years, there is a tendency to marry young. Out of a female population of 171,000,-



QUEEN'S GOLDEN MONASTERY, MANDALAY

000 over 26,000,000 are widows who may not remarry. Of every 1000 females born only 483 reach the age of 15 and only 238 attain 45 years as compared for example with 708 in Sweden. The study of Indian vital statistics apparently shows that each 1000 females fail to produce 1000 female offspring to reach the reproductive age. But the census shows an increase of 5,000,000 population a year. Some authorities have estimated a population of 700,000,000 in the year 2000. But those are mere "shock" estimates. Of each 1000 females 157 marry at 15 years of age and the proportion is increasing, which may result in shortening the life span still more. It is significant also that of every 1000 births the mothers receive skilled help in only 60 cases. The high mortality rate is apparently due not so much to overpopulation per se as to lack of sanitation and medical services. But the diet of the peasant is only about $\frac{1}{3}$ the equivalent of our farm diet in United States, too little milk and vegetables.

The Chinese farmer stands in striking contrast with the Hindu ryot. The average ryot is a thin, obviously undernourished, sorry-looking specimen physically, while the Chinese coolie or farmer is a sturdy fellow capable of doing a full day's work in cold, temperate or tropical climates.

More than 10,000,000 Chinese have migrated

to other countries in search of something to do. No more adaptable laborer is known. Their endurance is phenomenal, whether it be heat, cold, long hours or violent exertion. Some 20,000,000 of them migrated from North China to Manchuria. I remember seeing a trainload of them in open gondola cars, standing up, packed together like so many head of livestock, smiling their way along the 1000-mile journey to the distant wheat and soy bean empire. They manage to procure a better diet than do the Indians—soy beans, vegetables, greens, crayfish, chicken and pork. Their every-day beverage is tea, served weak and flavored with flower petals. For brewing tea the water must be boiled and is therefore perfectly safe to drink, while the ryots drink water open to a wide range of pollution, with cholera endemic as a result.

Thus having portrayed sketchily the human material, the 750,000,000 farmers, the very web and woof of China and India, with which we have to deal, we may pass on to a study of their reaction to the physical environment in which they live, and to the native and superimposed social customs, religious beliefs, economic conditions and political systems that have made their existence what it is.

RELIGION AND DAILY LIFE

No human race is totally without some form of religion. It is never without influence upon the lives of the people, the degree and nature of that influence depending on whether the particular religion is militant, mystic, philosophical, animistic or rational. In their reaction to the appeal of religion the Chinese take a wholly pragmatic view of the matter, obviously holding that religious beliefs must harmonize and fit into the routine of everyday life, offering a moral sanction for decent behavior, contributing to the establishment of satisfactory human social relations, in short, serving as a practical philosophy of life.

The Chinese are not fanatically religious. They may worship their ancestors and at the same time be Buddhists, Taoists and Christians without feeling any inconsistency. The ancient Chinese personified the phenomena of nature, rendering service to gods of the wind, rain, rivers, thunder, marriage, the kitchen and many other josses. Their ancestor worship is more often misunderstood than not. The forefathers were of course not dei-

fied. The cult is based on a reverent attitude toward the aged and ancestors in the belief that their good-will was to be obtained by simple ceremonies at the household shrine.

Confucianism is not strictly a religion but rather a guiding moral code. It has no priesthood. Confucius was the Socrates of China. He taught a system of behavior in man's five relationships, viz: government and citizen, husband and wife, father and son, elder and younger brother, friend and friend. Through the teachings of Confucius in his school in Peking an excellent curriculum in the science of government and social conduct was established that has exercised a great influence on Chinese thought for the past 2500 years.

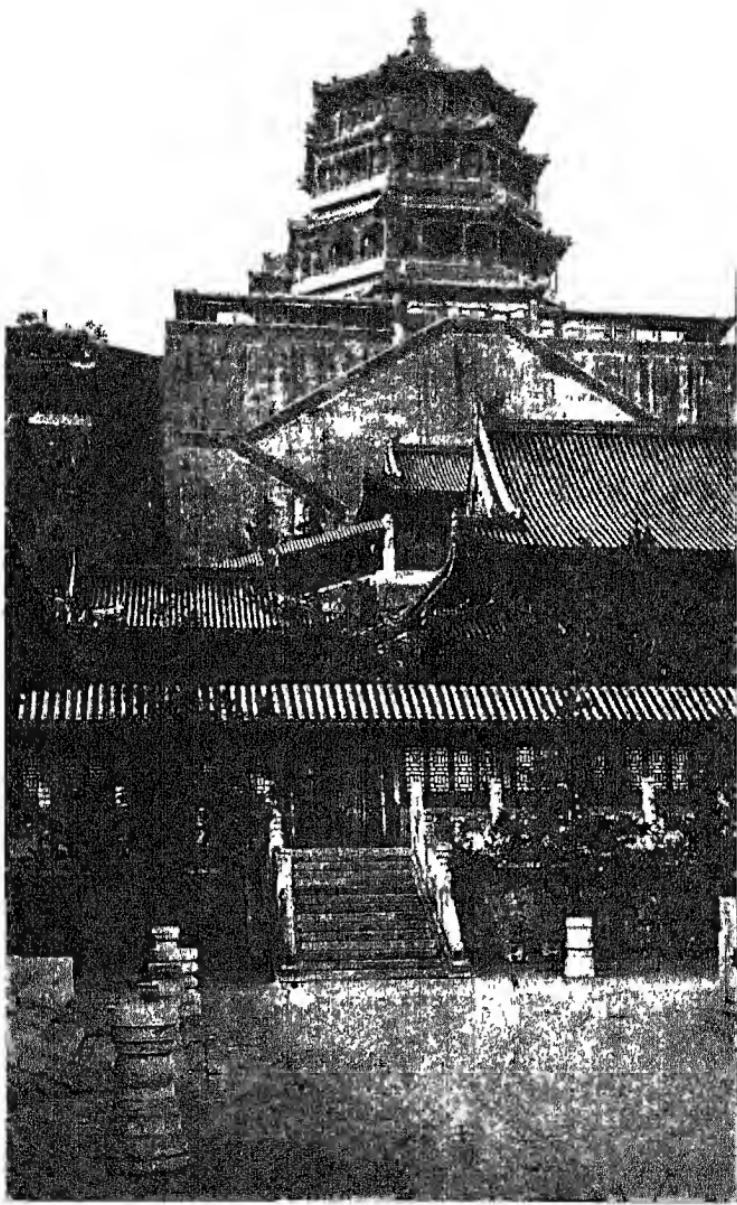
The simple workaday viewpoint from which the Chinese proceed to test the potency of the various petty deities comprised in their cosmogony clearly demonstrates the practical nature of the race, their scepticism and especially their abundant and saving humor. In any country subject to serious droughts a man-made rain god may be hard put to it to perform according to expectations. His reputation soon begins to wane if no rain comes to break the continuing aridity. To call his dereliction to his attention the Chinese custom is to set the rain god out in the sun in an

exposed place in the hope he may realize the seriousness of the emergency.

In a trip across the Pacific the ship on which I was a passenger ran into a furious storm of considerable duration. Somehow the Chinese crew learned that one of the officers of the vessel was bringing home from China a small joss. To appease the crew members, who at once concluded it must be an evil joss, the officer gave up the little idol whereupon the men beat it into a thousand pieces. The storm abated shortly thereafter as storms have a habit of doing.

By reciting these instances of the behavior of coolies I would by no means imply that the Chinese are irreligious in a serious sense. Their fundamental reactions to the supernatural are as deep-seated as those of other races. They have learned in the hard way, the way of experience, to rely upon their own efforts in all emergencies. In famines due to floods or drouths they may die by the thousand. All human efforts are then unavailing and they recognize that fact. But this feeling is not the fatalism of predetermined hopelessness and uselessness of human effort. The characteristic philosophy of the Chinese is to do the best one can with what one has. Then, if one fails it was because the task was impossible.

Buddhism was introduced into China in 65 A.D.,



BUDDHIST TEMPLE IN CHINA

and has spread throughout the land. It is the prevailing religious cult. For the most part it is the northern or Tibetan sect of Buddhism and has been greatly modified by admixture of Chinese customs, ceremonies and beliefs. Lately the Chinese Buddhist Association has been sending students to Tibet, Ceylon and Thailand for religious study and are conferring with Buddhists in Burma and Malaya. Lamaism is a form of Buddhist ritual prevalent in Tibet and Mongolia and is mixed with Shamanism.

Mohammedanism came to China in 650 A.D. Today it is attracting more and more attention. Being a positive, belligerent religion, it fits into the present military mood of the Chinese. The study of Islamic culture is a regular part of the curricula of Chinese universities.

Religion is not without effect upon Chinese thought and action. But the people instinctively feel that a religion should be positive, helpful and inspiring, without a long catechism of tabus and restrictions. The homely doctrine that God helps those who help themselves has served well in all the vicissitudes of their more than 40 centuries of struggle.

Too many of us are prone to think of China as mysterious, as moving in ways that are dark, in a word, as quite beyond comprehension to the occi-

ental. But we must understand China. It's not impossible. Do we fully understand the queer doings of our next door neighbor?

The early activities of Christian missionaries in China were ill-considered and precipitate. The Chinese were not favorably impressed by the doctrinal and denominational aspects of Christianity. Was the God of the Presbyterians different from the God of the Methodists? The attempt to replace Confucius with Christ was a mistaken notion. Nay more, it was a fatal error and alienated the Chinese. All officials were selected from the scholarly class that had passed the long series of severe competitive examinations of the Confucian system. But the church struck at the ceremonies of respect for ancestors and of honor to Confucius as a great teacher. Of late, missionaries have ingratiated themselves into the good graces and affections of the Chinese by their technical assistance along medical, sanitary and dietary lines, leaving it to the Chinese to judge the sort of religion that would induce its devotees to render such service.

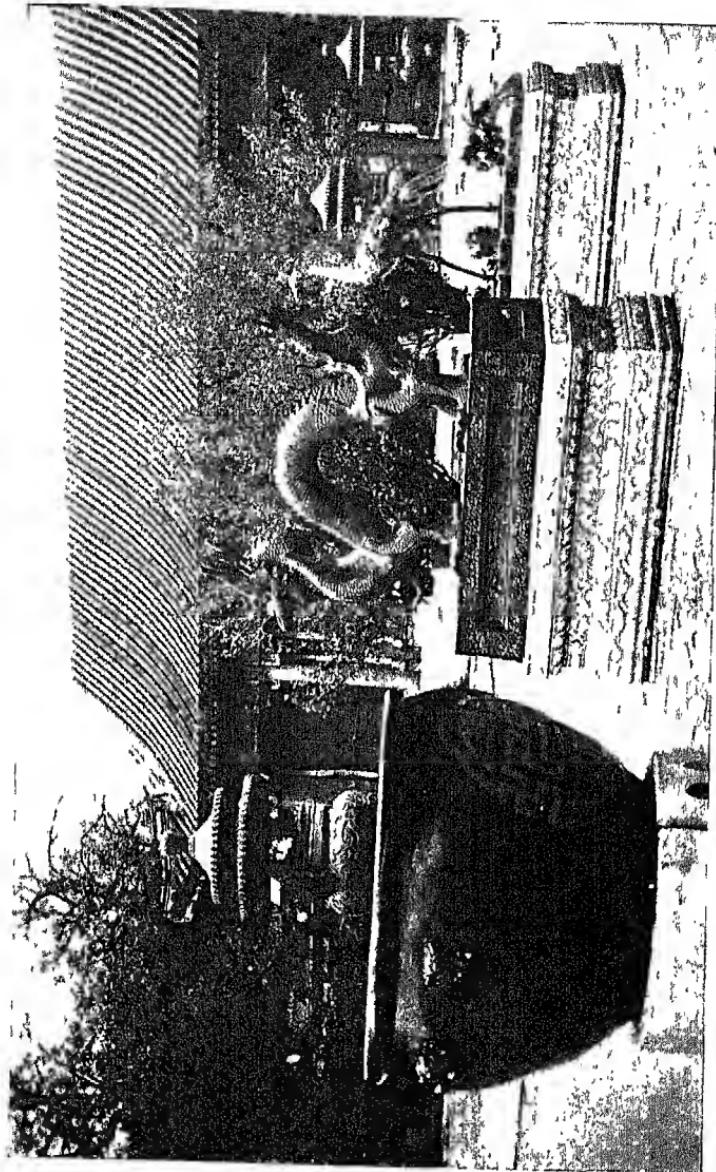
The Temple of Heaven in Peking made a deep impression upon me. It was simply a large, raised stage of masonry, perfectly bare, and so located in a dense grove of tall trees that when the emperor of former times mounted it, as he did on ceremonial occasions, he could see nothing but the

trees and the heavens above. It would seem that his thoughts must have been thereby attuned to the very essence of spiritual communion as he offered a prayer to the Supreme Being.

In India religion is a quite different matter. As Lajpat Rai of Ranjab explained, "Religion has had to do with all civilizations, but it has not been the dominating feature of them all. Ever since India had a literature the civilization embodied therein and the life of the people have been dominated by religion. The Indian peasant believes that the true life is a spiritual life. He respects the saint more than any other man. He regards the material world as unreal and its cares as illusion." Of course he does not put this conviction into practice. Neither does the Christian give away all his worldly goods and take no thought for the morrow, as Christ suggested.

The four principal castes, Brahmin, Rajput, Vaisya and Sudra, are recognized in the Rig Veda, the Bible of Brahminism. This caste system separated the Hindus into four mutually exclusive and self-contained groups, to be treated in more detail in another place. As a part of the Brahministic cult they have exercised a profound influence upon every feature of life.

In the first place since men are bracketed in four divisions on different levels and can neither raise



INCENSE BURNER IN PEIPING

nor lower their social standing, the Hindu can not believe that all men are created equal or ever can have equal opportunities. Individuals are on so many levels that it is quite incredible that the economic environment may ever be so standardized as to meet the various capacities, needs and desires of the several castes. For it must be borne in mind that the four chief castes have been divided into hundreds of subcastes or trades. Then, too, by the same token, there are the untouchables, 60,000,000 of them, kept segregated on the outer fringe of civilization.

In fact the individual not only can not change his caste but he can not even fully develop in a single lifetime. He must pass through an endless series of rebirths. That belief results in absolute fatalism. We occidentals attribute much of our physical and mental make-up to hereditary characteristics derived from ancestors. We cheerfully believe, however, that we may overcome some of the effect of unfavorable genes that came to us from grandparents and may thus take credit for any improvement we make upon them.

But the Hindu is his own ancestor or rather his whole line of ancestors back to the beginning of time. The whole catalog of them were just his previous existences. He is not the end result of the genes of his forefathers but is the ineluctable

outcome of the kind of life he led in his former avatars. It's his Karma that determines his fate. Karma is the term used to signify the result of the soul's past experiences. On the face of it this doctrine is not so different from the scientific theory of heredity. Karma is not what a person inherits from his ancestors but what he inherits from himself in earlier incarnations.

The number of these rebirths of an individual may run into infinity. And not all of them are pleasant. Bad Karma lowers the level of life of the next existence. And no matter how many rebirths a man may pass through with most exemplary conduct nor how enviable a status he may have attained, some misdeed may set him back at the bottom of the ladder to be born in a cobra or jackal, and start all over again, like the Greek Sisyphus and his boulder.

According to the canonical scriptures of Buddhism the Buddha passed through 550 previous lives, all described in a series of so-called Jataka tales which have served as a basis for the fables of Aesop and other later fabulists. So appalling did this endless series of rebirths appear to the Buddha that he devised a system of meditation and trance by which one might rid his mind of all attachment and desire for life and thus attain nirvana, or non-existence.

A purely negative religion in which the goal is to escape from existence considered as a prolonged misery can not exercise much driving force toward any progressive accomplishments.

Interminable disputations and hair-splitting arguments are important exercises in Indian religions, especially Brahminism and Buddhism. A translation of one among the hundreds of such discussions, this one from the *Milindapanha*, will suffice as an illustration. The dialogue takes place between King Milinda and a priest about the definition of oxcart. "What is the oxcart, your majesty? Is the pole the oxcart?" "No." "The axle?" "No." The same question and answer follow in regard to the wheels, the body of the oxcart, the yoke, the reins, the goad. "Verily now, your majesty, the word oxcart is a mere empty sound." And so on ad infinitum. But for all practical purposes there is such a thing as an oxcart. The peasants use them daily and by no means consider them as unreal and non-existent. Nor does the time spent in imagining oxcarts to be an illusion speed the process of hauling rice to market.

Similarly the Hindu will argue for hours to prove that there is no ego or soul in man, calling the word "a mere term, appellation, convenient designation for sensation, perception, predisposition and consciousness." Yet he holds to the doc-

trine of the eternal peregrination of his soul and finding a habitation from one rebirth to another in the body of an animal or human form. In this round of experience the soul must in fact become thoroughly seasoned to harsh environment. For in one of the chapters of the Tipitika the Buddha in a discussion of "how existence in hell is possible" explains that "the inhabitants of hell, through the superior potency of their former deeds, are not 'consumed though cooked in hell-fire for many thousands of years."

Thus throughout Buddhism and Hinduism the theory and the practice of religious tenets may be as wide apart as the poles. The Brahmin texts prescribe in the utmost minutiae of detail just when, where and how all the functions of the body should be discharged. Here and there the Hindu texts speak of one God, the supreme Brahma. Yet there are Siva and Vishnu to complete the vedic trinity. Moreover in temples and the homes of the people one may see idols to which devotees pray for prosperity, phallic symbols to which women pray for more children and an almost endless variety of physical objects used in the religious ceremonies of those who are unable to grasp such metaphysical abstractions as the upper hierarchy of divinities.

Hinduism, as we have seen, while prescribing

detailed rules of conduct gives the fullest freedom of thought to its votaries and encourages them to live in a realm of supermundane dream into which the Chinese could never be induced to venture.

Whatever else may be said concerning the influence of religion on every day life the Hindus do not lack for religious counselors. There are 5,000,000 Brahmin priests and an indefinite number of gurus or teachers of Vedic doctrines. The Brahmins are the highest caste in the social scale. As with members of other castes, they are born into the clan. It is not a status that may be achieved otherwise. Some of the Brahmins are distinguished scholars and citizens. But they need not be even literate and many of them can neither read nor write. Illiterate Brahmins, however, may evince great tenacity of memory and be able to recite from oral tradition extensive passages from the sacred Sanscrit literary records or from the Pali texts of Buddhism. For centuries these scriptures were handed down by oral transmission. The orotund, monotonous intoning of these ancient writings exercises a soothing and satisfying effect upon the hearer. In Moslem schools the Koran is similarly recited in unison by the teacher and pupils.

The active rivalry between the Hindus, Moslems, Buddhists, Animists, Sikhs, Jains, and other

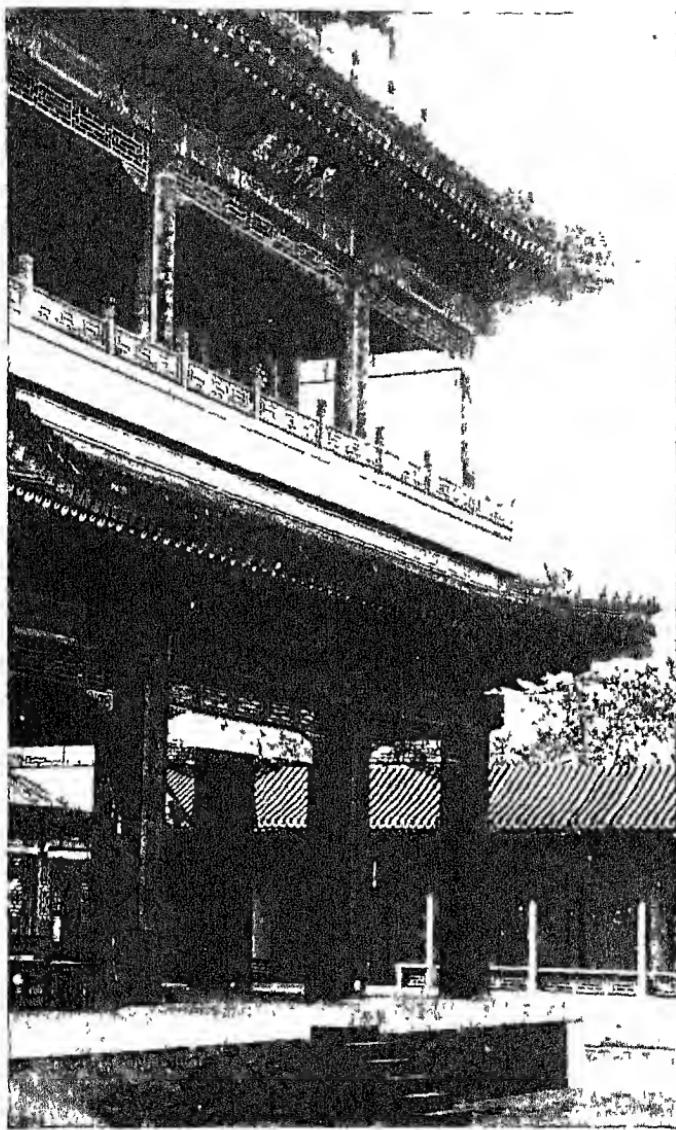
religious sects gives abundant opportunity for debates on the village street or under the bo-tree. Since these arguments sometimes lasted for hours the peasants might waste much time listening to futile otherworldly discussions somewhat as our idle villagers formerly gathered about the old cast-iron stove of the cross-roads grocery store. Occasionally such matters found their way into the sacred texts. One question that has never been settled is which is the wiser Brahma or Buddha. On that point it is related in the Kevaddha sermon that a Buddhist priest desired to know "where the four elements of being, to-wit earth, water, fire and wind utterly cease to be." By trance he acquired the gift of levitation and visited nine different conclaves of gods without getting any information on his problem. Finally he came to Supreme Brahma seated on a throne and surrounded by his suite of 33 lesser divinities. Brahma evading the question, exclaimed "I am Great Brahma, the Supreme Being, the Unsurpassed, the Perceiver of all things, the Controller, the Lord of All, the Maker, the Fashioner, the Ruler, the Father of all beings who have been and are to be."

The priest, undismayed, repeated his question with the same subterfuge as a result. At last Brahma took the priest by the arm and led him

aside with the frank confession:—"These gods of my suite believe that I see all things and know all things. Therefore was it that I did not answer you in their presence. I know not where the four elements utterly cease."

The gods of the Hindus, like those of many other races are anthropomorphic, no better or worse than ordinary men and women. They may be full of pranks, tricks, and mere playful smartness. They appear and talk with all sorts of persons in the guise of children or animals. Some years ago under the tutelage of Henry C. Warren, a noted oriental scholar, I tried to ascertain at first hand what wisdom the Hindu religion might offer of value in the conduct of life. I found that it requires more than average American patience to wade through the many repetitions of rather banal platitudes, and far more than average ingenuity to decode the meaning of the dreamy metaphysics. Some of the problems on which their theologians are everlastingly breaking their wits seem utterly meaningless and also quite beyond solution. Time and again a supposed explanation or description is given of a state of mind said to be "neither consciousness nor unconsciousness." I gave up trying to picture myself in that tenuous film between those two states of mind.

Years later I traveled through the Hindu and



CHINESE ARCHITECTURE

Buddhist countries. India, Burma, Siam, Indo-China, Java, China and Japan. Everywhere the priesthood seemed to be treated reverently. The Buddhist bonzes in their yellow robes went about the villages carrying their bowls in which the people deposit their various contributions of food. The priests are of course mendicants. In most localities they were not attractive individuals. In Northern India and particularly in Burma they were unkempt and downright lazy. The beautiful Queen's Monastery in Mandalay, a large structure of teak wood, elaborately designed and ornamented with thousands of carved figures was occupied by the bonzes, but was tumbling to ruins from lack of care and the attacks of termites. Only in Siam or Thailand had Buddhism preserved any noticeable vitality of a spiritual nature or real contact with the practical life of the people. There the bonzes helped in the rice harvest, taught school and carried on a sort of club work with young boys. Elsewhere Buddhism shows a promise to degenerate into a cult of superstition and meaningless ceremonies, conducted by a multitude of priests who, in the years since 250 B.C. when the Buddhist canon was established in manuscript form, have so transformed the original doctrines that Buddha himself would not recognize the child of his brain.

The spiritual sublimation of existence is characteristic of the Hindu peasants' conception of life. To picture a world of dreams and heavenly happiness is apparently a meditative escape from the wretchedness of the reality in which they live. For example I was given to understand that to the peasant "Love is not merely a physical or mental state nor a sensation. It is an adventure into the future, freed from the shackles of specific purpose, constituting a pure play." Psychoanalysis is simplicity itself compared with that definition.

Hinduism presents to its devotees the widest possible choice. They may elect to be monotheists, holding to great Brahma as the supreme deity. Or they may worship Brahma, Siva, Vishnu and a number of lesser divinities of considerable importance. Or if no form of abstract religion appeals to them they may render service to wooden or metallic idols, figurines of all sorts or trees or rivers or to whatever they may choose to ascribe some sacred quality. But at no point does Hinduism seem to become a propelling force for social or economic improvement. It remains aloof in the dream-land of meditation.

The India of today, however, is not exclusively Hindu or Moslem. It is the India of Hindus, Moslems and other minority religions, a mixture of Hindu astrology upon which have been grafted

Moslem militancy and the sectarian doctrines of the Jains, Parsees, Christians and Sikhs.

The list of specific commandments and taboos is a long one, touching almost every thought and activity of the people. Yet the influence of Hinduism tends toward a static and fixed condition that has continued down the ages in changeless uniformity. One may stand in the Elephanta Cave near Bombay and watch the stream of women pausing before the phallic stone to pray for more children. And then remembering the prohibition by the priesthood of the practice of birth control one easily understands the pressure of India's growing population upon the production of food by her diminishing crop acres. Hinduism is not a fighting religion, nor a challenge to face life and win. It is rather a cult of spiritual asceticism in which the devotee may brood in the lethe of forgetfulness, while actually living in misery, or a more agreeable rebirth.

While the caste system has been a curse, as will be discussed in another chapter, it should be remembered that "at no period of Indian history" as stated by Lajpat Rai "has the system stood in the way of a man from the lowest caste becoming divine. The untouchables, the pariahs of Madras, have produced saints whose shrines and images are worshipped by Brahmins and Sudras alike in

the temples at Trichinopoly and many others." Thus the wretched, ostracised untouchable while attending to the most filthy and degrading tasks of the village in association with garbage, pigs and dogs may yet live in hopes of being sainted as a reward for his physical and social privations.

Floods, drouths, famines, pestilences and the harshest conditions of poverty are simply parts of life to the peasants of India and China. They both must survive this round of hardships or succumb. In India religion helps them to forget the present by meditating on other worlds and other existences. In China Confucianism and even the modified form of Buddhism have steeled the peasantry in the fighting resolve of individual victory by personal effort. The words of Kipling's "If" could justly be said of the Chinese peasant, particularly the lines—

"If you can force your heart and nerve and sinew
To serve your turn long after they are gone,
And so hold on when there is nothing in you
Except the will which says to them 'hold on'—
Yours is the earth and everything that's in it."

No religion can exercise an ennobling influence or spiritual upsurge unless its chief divinity is worthy of adoration and worship for his superhuman qualities. Confucius was a profound philoso-

pher, great teacher and outstanding man. But Brahma, Siva, Vishnu, Buddha and the rest of the Indian hierarchy are neither omnipotent nor omnipresent, nor omniscient, or particularly admirable. In fact they are sometimes represented as rather stupid. I have stood before Buddhist temples and watched communicants cast coins into the alms barrel and then ring a bell for fear Buddha might be nodding and fail to take note of their contribution. Such divinities can hardly be leaders in a crusade to improve the moral, social or economic condition of a nation.

If we may predict with any confidence the future attitude of the Indians and Chinese as well as other peoples toward religion, we may say that the present trend is toward a positive, practical and forthright set of helpful religious activities definitely connected with the problems of daily life, with the accent on stark realities, rather than on evangelism or miracles. The impact of war has turned the world's thinking in that direction, not so much toward more religion, as toward a more definite cult, better articulated with actuality. This may mean that the influence of Christianity and Mohammedanism will increase during post-war years while Hinduism and Buddhism will lose some of their appeal.

III

EFFECTS OF THE CASTE SYSTEM

The term caste is so universally employed to designate the indigenous social structure of India that we are prone to overlook similar classifications in other countries and in other times. Since history began man has nowhere been without castes. In all primitive social groups and races priests, warriors, tradesmen, laborers and slaves have existed side by side. This system came about historically in the early days of tribal society from the sheer necessity of a division of labor in the enlarged family or clan.

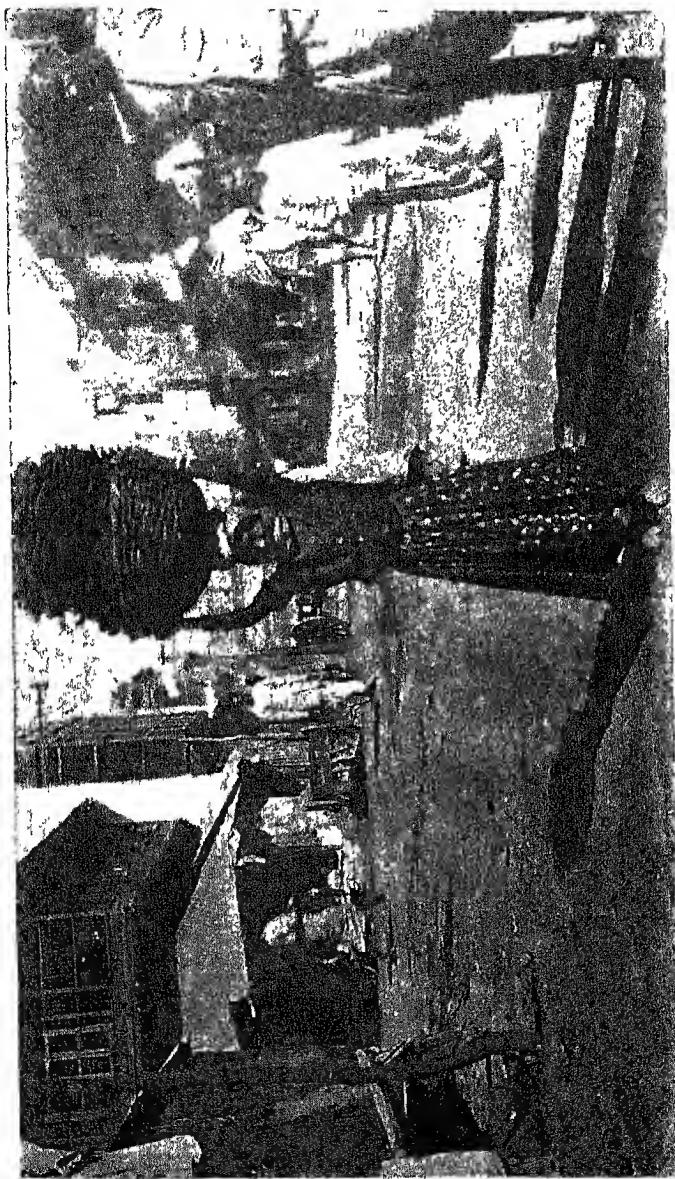
In ancient Egypt, according to Herodotus, there were seven classes of the population, to wit, priests, warriors, cowherds, swineherds, hucksters, interpreters and pilots. Warriors were the only class except the priests who enjoyed special privileges, often receiving grants of land from the kings. Swineherds were strictly forbidden to enter Egyptian temples, as are the untouchables in most of India today. Beans and fish were taboo as human food. The priests were unable to endure even the sight of beans, while onions were a staple part

of the diet, as evinced by the fact that \$10,000,-000 worth of onions were consumed by the slave labor while building the Cheops pyramid.

The root meaning of caste is pure, from the Latin adjective *castus*, and hints at the conception of self-contained, inbred groups that kept their blood pure by forbidding intermarriage with other clans or tribes. The idea of superiority of race was also involved in the pure-bred strain, somewhat like Hitler's superman.

Apparently the caste organization came into India from Persia at least in some of its modern phases but it is mentioned in the Indian Rig veda in 1200 B.C. The invaders of India were shepherds or herders of cattle, and in tribes or military confederations, each under a leader. Later development set a Brahmin at the head of each clan with nobles and a miscellaneous proletariat making up the rest of the tribe. In the laws of Manu promulgated about the time of Christ, four castes were named: Brahmins, Kshatriyas, Vaisyas and Sudras. The formation of any further castes was forbidden.

The Brahmins or priestly caste were said to have issued from the mouth of Brahma, the Kshatriyas from the arm of Brahma, the Vaisyas or merchants from his thigh and the Sudras from his foot. But whether the system ever existed in this exact form is doubtful. At any rate these four



CARRYING DUNG CAKES IN INDIA

chief castes, modified in the course of time in their functions and limitations and gradually subdivided into three to four thousand subcastes constitute the basis of Hindu society. Castes still possess their biological, social, vocational, economic and religious aspects.

In any statement one may venture to make about the present status of castes in India, one is forced to grope his way in the no-man's land of controversy. The Hindu writers differ widely among themselves on nearly every point. One would hardly expect an orthodox Brahmin, and Mahatma Gandhi and Dr. B. R. Ambedkar, an eminent untouchable, to agree on the advantages and disadvantages of caste.

Prof. Altekar of Bombay University insists that the caste system is a peculiar product of Hindu civilization, that there are not and never were classes in occidental countries based on the accident of birth, while Indian castes are entirely founded on that accident. But the priesthood among the Incas, Aztecs, and Egyptians was hereditary. There were various inter-class taboos and barriers in those races. The persistence of most royal families as rulers is based absolutely on the accident of birth. And what about the House of Lords, or the Mayflower Society and similar exclusive groups determined by lineal descent from

a common ancestor? India is not the only country in which groups of the population have erected claims of superiority, pure blood and exclusiveness on the accident of birth.

We may agree with Prof. Altekar that caste has proved to be a curse to India. It is not only static and unchangeable, but rests also on religious considerations which have little reference to this world. And since subcastes are being created almost without limit and the rigid framework of these vocational castes prevents a shift from one trade to another, desirable readjustments are practically impossible to meet the constantly changing demands for various skills.

At the very first Indian hotel where I stopped I was brought face to face with the fantastic fragmentation of human jobs. When I came to pay my bill I found I had been maintaining a retinue of servants of almost princely proportions. There were the bed maker, the tea bearer, the bath boy, the sweeper, the wiper, the baggage porter, the towel custodian, the mosquito-net-adjuster, the insect-exterminator, the hall boy, the water carrier, and a personal servant who dogged my steps by day inquiring if I hadn't some errand for him to run, and at night slept on the bare marble floor of the corridor ready to attend any of my wants.

The boy who cleaned the bath tub dared not

bring fresh towels nor kill a vagrant cockroach. In fact some of the servants belonged to a segment of a subcaste a bit too elevated for them to condescend to becoming practical entomologists.

At times a suspicion entered my mind that some of this atomic subdivision of the tasks of hotel room service was due to laziness, or tropical inertia or perhaps to the necessity of splitting hairs to make the jobs go round. There were not enough really man-sized tasks for the horde of employees. Therefore the work must be assigned in small parcels.

The renowned professor to the contrary notwithstanding, the distinguishing characteristic of Hindu castes is their rigidity, their exclusiveness. In other parts of the world a man may change his trade without becoming an outcast. A minister's daughter may marry a liquor dealer's son. A stone mason may celebrate a birthday by inviting to dinner a carpenter, an accountant, a drug clerk and a hotel chef. In India such doings are unthinkable. The host would be compelled to provide different food for each guest, prepared by a special cook and, to cap the climax there would be no party at all, for the host by strict caste tradition would have to eat alone. Otherwise he would be polluted and would require a ceremonial purification.

This religious tabu superimposed upon fanatical exclusiveness renders the Hindu caste a difficult system to fit into a changing world. Time and again my informants in India insisted that the first step in breaking the inertia of centuries is somehow to inspire the peasant with a desire for



PEDES FRIAN BRIDGE IN CHINA

a better life. But simple as that proposition sounds, it's easier said than done. A pessimism born of bitter experience, reinforced by religious precepts, hardened in the rigidity of caste petrification, and infused with the belief that existence is merely a miserable round of reincarnations from which one is fortunate to escape, is not a

fertile soil in which to sow a boom program of progress.

Yet these same peasants, while unable to break through the adamant barriers of caste, with the crudest appliances, all handmade and belonging to the stone age rather than to 1945, turn out great quantities of articles of excellent construction and artistic merit. Each man's factory is a low 6-by-6-foot room in which he himself is the most conspicuous object, squatted on a dirt floor. But with a bow-string lathe, an old file and hammer and a baked-mud stove he makes all manner of beautiful brass utensils from flower vases to curry bowls. So long as he feels himself bound upon the wheel of caste it is perhaps fortunate that he is content with these conditions. He and his forefathers since the "Aryan" invaders drove out the aborigines, 3000 years or more ago, have lived in the same little village and have done the same round of tasks in the same way.

As already indicated every vocation gave birth to a caste and these multitudinous subdivisions of the original four castes are as jealously interested in the rank they occupy on the ladder of Hindu society as are the officials who attend state functions at the White House. Each caste is eager and proud to assert its spiritual superiority to lower castes "while it chafes at the thought that there are

other castes which look down upon it and count it as inferior. The feelings of superiority and inferiority, based on birth and vocation became the firm rock on which dissensions and bitter enmities were securely reared, and these have proved to be a disastrous impediment in the path of progress of Hindu society."

The caste system is troubled not only with these heartburns over the inequalities of rank between the chief castes but even the vocational castes are further segmented into groups on different levels or ranks. And this jealous struggle for rank or for the satisfaction of feeling superior to some other less favored group is found among the 60,000,000 untouchables, the pariahs or outcasts. Here several degrees of untouchability have been set up in a fairly rigid sequence. For example among the pariahs the highest stratum do not contaminate or pollute members of regular castes unless they come into physical contact with them, actually touch them. Further down the scale come the "unapproachables" who taint caste members if they approach within a certain distance of them. Then there are the "invisibles" the mere sight of whom defile reputable persons of the upper castes. The mere shadow of one of these accidentally cast upon a Brahmin renders him unclean and necessitates ceremonial ablution.

While listening to the explanation of such matters by a man of the Vaisya caste it occurred to me that I, being an outsider, must be catalogued somewhere among the untouchables, and half-jestingly I inquired if foreigners might not be classified as "unthinkables," the very thought of whom would tarnish a Hindu brain, and spoil an otherwise pleasant evening. But he was not in a humorous mood.

Writing recently on the Hindu peasant the Earl of Willingdon remarks "under the rigidity of caste principles the rural worker has always accepted his position of serfdom, of the hewer of wood and the drawer of water for the higher caste brethren, and for this reason, and also through want of education and lack of ambition, he has shown little inclination to try and rise in the social scale. It is difficult to improve the conditions of life with people who, under the stringency of caste traditions, see no hope of improving."

But in recent years especially since 1930 the vocational barriers between castes are beginning to break down. Machinery is an important factor in this change. A man who is not proficient in the art of hand tailoring may buy a sewing machine and soon learn how to make creditable clothes. In war plants all castes work side by side. They may even eat together in factory restaurants each

worker choosing the food proper to his caste. Each one may comfortably assume that the food has been prepared as his caste requires since the crew of cooks is recruited from all castes. And for obvious reasons under the impact of the hurly burly of war emergency the causes that determined superiority and exclusiveness, such as food, dress, ritual, place of residence and vocation may cease to operate. But as the economic and vocational features of the intercaste barriers weaken, the people cling with ever more intensity to distinctions of birth, with the unfortunate result that superiority claimed on this account excites more jealousy and resentment than it did in earlier times.

It seems fairly safe to prophesy, therefore, that notwithstanding the fact that the caste pattern had not undergone any fundamental change for the better for several centuries, and seemed to present a hopeless task to any social worker or government agency, the slow process of industrialization will inevitably loosen the inflexibility of the caste system. In fact some of the most liberal minded leaders among both Hindus and Moslems in India are beginning to say that the only essential doctrines of caste that need be preserved at all odds are the tabus on interdining and intermarriage.

But those privileges are simply reserved personal rights in all societies in all parts of the world.

The rights to choose mates and house guests exist with or without caste. Even the negro problem in the United States would be much nearer solution if we should drop the discussion of color, habits, superiority or inferiority of race, leaving to each individual the right to marry and to choose whom-ever he wishes for his house guests.

It is well to remember, however, that all glowing optimistic predictions as to the prospective disappearance of the age-old distinctions of Hindu castes must be predicated on the fact that nearly 90 percent of the population are illiterate, that there is hardly an item or detail of Indian life without its religious aspect and that one might almost as well try to alter the orbit of the moon as to introduce significant changes into human affairs in India without the approval of the 5,000,000 priests who for the most part jealously guard their hold on the habits and thoughts of the people.

In fact the intricate complexity of the situation is only inadequately adumbrated in the above discussion. Castes, poverty, deficient diet, high taxes on land, usurious rates of interest, lack of sanitation, illiteracy, despondency, fatalism, and a religion which largely overlooks the actual world are all intimately bound together into a single problem, the problem of how the Hindu peasant may be helped to move ahead.

Moreover by no means all of the people are included in the 4,000 castes to which reference has been made and the group of 60,000,000 untouchables. In the Central Provinces there is an almost endless stratification at various levels of castes of lower standing. The Pardhis or sportsmen are divided into four groups: those who may use firearms, snares, tame hunting leopards or use oxen to stalk game. In mountainous regions and here and there on the fringe of civilization there are numberless nondescript groups with native systems of social classification. In the Himalayas there are the Batwals and Dabis, a sort of hillbilities. Some of them eat monkeys. One sect of Batwals derive their descent from a raja's daughter who fell from grace while another group claims origin in a deified monk.

The attention of the outside world has been quite naturally drawn most poignantly to the lamentable condition of the depressed classes or untouchables. Mahatma Gandhi who came of a Bania family, a branch of the Khatris or traders, has long interested himself deeply and earnestly in the welfare of the untouchables. He isolated himself in a village of these outcasts, helping them to improve their economic condition particularly in the use of the charka or spinning wheel and with other home industries. In 1935 Dr. B. R.

Ambedkar pledged himself to renounce Hinduism and with his 60,000,000 fellow untouchables adopt some other religion unless their lot were relieved. Later the Maharaja of Travancore granted the privilege of the temples to the 2,000,000 out cast subjects in his State.

The denial of the right to enter the sacred temples has rankled in the breasts of the untouchables for ages, and from time to time these downtrodden unfortunates have tried to force the abandonment of that tabu. An instance of their efforts occurred near Bombay during my visit there. Large numbers of untouchables proceeded to a hill which was crowned by a temple, where they congregated in such numbers that no high caste person could reach the temple without coming into physical contact with one or more of the outcasts. There they sat or reclined upon the ground night and day for two weeks, having food and water brought to them and being relieved from time to time by others of their group. High caste Hindus were thereby prevented from reaching the temple. The moment they touched even the garment of an outcast they must return home and go through purification ceremonies. But they doggedly refused to yield the right of temple services to the untouchables who finally lost courage and gave up the campaign.

It is perhaps already sufficiently apparent that the castes of India are by no means unique institutions. Analogous social and economic groupings are quite universal. Our labor unions are almost exact counterparts of the Hindu castes, the



GRINDING KAOLIANG IN CHINA

only essential points of difference being that our labor unions are not necessarily bound together by common religious affiliations and blood lines. The rivalries, hatreds and tabus between the unions are strong enough in all conscience. If a member should violate any code or tradition of

the union he may be expelled and thereby become an outcast in precisely the same status as an untouchable in India. Various nasty and humiliating epithets are pinned upon him. He becomes a "scab." No lower or more despicable level of existence, in the opinion of union members could be conceived. The untouchable of India may humbly ask permission to enter a temple and be refused. The "scab" untouchable in the United States, if he should attempt to cross the picket lines of a union shop may be soundly beaten or even killed.

These unions may even draw pretty sharp lines on color, religion or race in addition to vocation. When we harshly criticize the social and intellectual leaders of India for not abolishing caste or at least modifying its worst features, we might well pause to think for a moment on what would happen to a member of Congress if he should propose the abolition of labor unions.

But the caste lines of India are noticeably breaking. Notwithstanding the fact that the individuality of the Hindu is weak and that social custom determines almost everything, evidences of change are seen on every hand. Hundreds of amusing stories are told on how the natives manage to get around the tabus on defiled food. An untouchable's shadow passing over a bowl of rice and curry

doesn't render it inedible. A person may drink water poured into his cupped hands from the leather water bottle of a lower caste individual, but dare not drink it from that same individual's tin cup.

Such little evasions of strictly orthodox rituals need not always be done surreptitiously. Gandhi and many other leaders have given public approval to a liberal relaxation of the bans in petty matters. Some of the peasants although suffering in desperate destitution, by strict interpretation of the rules were not permitted to do spinning and weaving in their idle time, since that would lower their standing. Gandhi not only grants them that right but urges them to carry on cottage industries. Even Brahmins when in need may do farm work or become cooks.

Sometimes this loosening of the bans in one locality may work grievous hardship in another region. For example the lowest castes enjoy the advantage of permission to migrate for the purpose of engaging in industrial labor in regions where the peasants are not allowed to do it. Thus Bengal Province imports thousands of outside workers on jute plantations while her own farmers are idle and going hungry. That was one cause of the fearful famine of 1943 in Bengal. The price of food was driven up so high by the artificial

overcrowding of an already densely populated region, that thousands starved to death from lack of money to buy food.

The gradual growth of cooperatives furnishes another ray of hope for the relief of caste restrictions. By the very meaning of the term to cooperate people must get together. And this getting together sooner or later involves crossing caste boundaries and even touching one another.

Encouraging results in this direction are steadily coming to light from the efforts of Dr. D. S. Hatch, an American social worker, in a village of southern India. This village, on the surface at least, seemed to be about as complete and contented as might be. The poverty-stricken low castes did not copy the upper castes. They could not afford to do so. Moreover the upper castes often remonstrated if they attempted to rise in the economic scale.

Refusing to consider the situation hopeless, Dr. Hatch began his study with a sketchy survey of conditions. The population comprised 30,000 Hindus, 9,000 Christians, 600 Moslems and other lesser groups. Catholics and Protestants had as little as possible to do with one another. There was no love lost between the Hindus and Moslems. The Hindus themselves were divided into eleven

mutually exclusive castes. And only one in seven of the population could read or write.

Among the 2,000 cows maintained in the village the average yield was two pounds of milk per day for a very short period of lactation. When the people were shown a picture of a Holstein cow in the United States that had given 112 pounds of milk in a single day, no one believed that such things were possible. Properly reared Hindu cows are perfectly content to give two pounds a day. Scrub bulls were running at large about the neighborhood. The work oxen were a miserable lot of weaklings of sorry parentage, seeking in vain for adequate pastures.

This was only 20 years ago. Today the South Travancore Rural Development Association is running full blast, its main object being to induce all castes and all religions to join hands in a common cooperative effort to improve the agriculture, cottage industries, education and health of the village. So long as the castes were unwilling to work with one another for the common good, the village program was largely one of mutual jealousy and backbiting. But Dr. Hatch succeeded in persuading them to forget their mutual bans in a project of selection and improvement of poultry. Success crowned their efforts in the production of large size eggs, leading soon to the demand for

4,000 baskets a year in which to handle the eggs. There was only one beekeeper in the community but within a few years 320 families owned enough hives of bees to produce 4,000 pounds of honey a year more than needed for home consumption.

By turning the thoughts of the people away from the imaginary contamination supposed to come from the mere association of one caste with another, they began to realize the deadly pollution of the water supply from lack of latrines and unprotected sources of water. In one year 9,000 of the people died of cholera. Hookworm was rampant and malaria was taking its annual toll of lives. In this village caste and class rivalries have been overcome. No communal organization is set up unless all castes and religions are included as far as the purposes of the association are concerned, since obviously intermarriage and inter-dining in private homes do not fall within the jurisdiction of these cooperative groups.

The gloomy picture painted by Prof. Altekar in 1929 may, therefore, not accurately represent the situation much longer. At that time as he described the problem "the social consequences of the caste system have proved to be extremely unfortunate. In a static society, regulated by a strict caste system, the place of each individual is fixed from the moment he is born, and that place can-

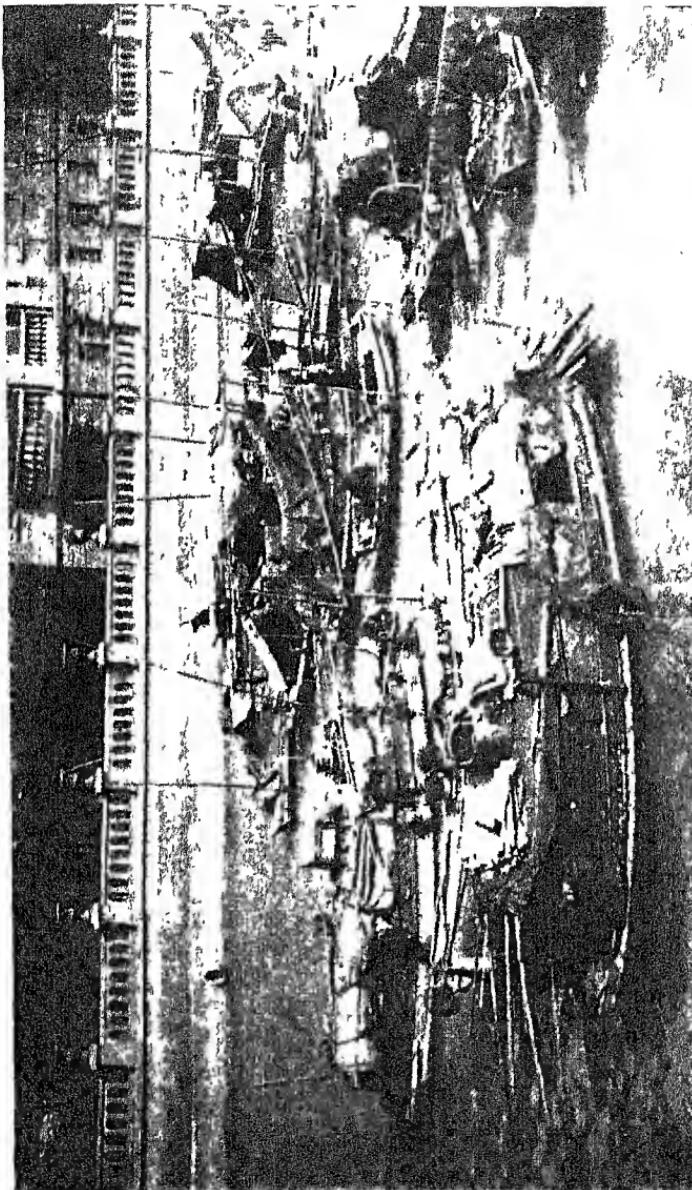
not be changed in this world and in this birth. This is a negation of the dignity of man and of the principle of individuality. It entails terrible loss for society in every direction and runs counter to the natural principles of selection. It kills initiative, men lose faith in effort and the pernicious doctrine of fatalism rules supreme. Society was so constructed that the lower classes were dependent for their very livelihood on the upper classes."

"The feelings of resentment thus engendered have been growing up for centuries in the bosom of those held to be inferior, and at present the sudden and terrific explosion of that resentment is witnessed all over the country. The political union, laboriously built up for half a century has been consumed in the twinkling of an eye in the flames of commercial strife. Man is a social animal and it is by mutual knowledge and understanding that sympathy and solidarity are produced. But the caste system demands that men must not mingle together intimately. Thus the chief sources of reconciliation are ruled out. Even among the wealthy and educated social intercourse is of a limited nature, scarcely exceeding the drawing room formalities. Except in cities and large towns social intercourse between castes is practically non-existent."

To all of which I would suggest that partly at

least this apparent impasse and unalterability are due to the fact that those leaders or thinkers who have seen the need of modifying the rigor of caste have been unwilling to step out of the framework of their own caste rituals and come down among the people who needed help and guidance. The muddle of the caste system can never be solved by men who are afraid of soiling their hands by associating with persons of so-called inferior castes. The shackles of caste have been imposed upon the depressed classes by the upper castes who alone are in position to bring about the emancipation of their less fortunate fellow citizens.

Little need be said with reference to caste in China. Among the professions and classes warriors stood near the bottom of the list. Priests were not especially revered. Agriculture was held in high regard. Merchants stood a little below farmers in public esteem. To the Chinese the attainment of education and real wisdom was the acme of human attainment. That goal for human effort had been set by Confucius. The highest ranks among the officials of government, educational institutions and the learned professions in general were open to the sons of the poorest and most humble coolies who showed special aptitude and native intelligence. The lowly son of a gate keeper of a palace



HOUSEBOATS AT SHANGHAI

might become governor of a province. In attaining that eminence he must pass all necessary examinations. But automatically his rise from coolie to gubernatorial distinction carried him across all the petty social barriers along the way.

IV

SANITARY CONDITIONS AND DISEASES

In all parts of the world health is a vital factor in determining the amount of work human beings can accomplish, and also their outlook on life. This is perhaps particularly true of the oriental tropics. Caucasian travelers who may visit these countries, if they are wise, will have informed themselves in advance of the infectious diseases to which they will be exposed, such as cholera, plague, amoebic dysentery, malaria, yellow fever and sleeping sickness. The wide distribution and almost constant presence of these pestilences in many tropical countries have been endured with a fatalistic resignation characteristic of certain races. Obviously so long as all the four horsemen of the apocalypse and their train of attendant afflictions are considered as necessary and inevitable evils little will be done to counteract them.

The Moslem in India and elsewhere has a fatalistic philosophy of his own. He has no consuming passion for settling everything today or to a nicety. He is quite ready to leave much to Allah and re-

fuses to become responsible for the regulation of the world. So long as his donkey, his wife, and his camel are able-bodied and willing to do their various assigned tasks, leaving him time for sleep, coffee and the five daily genuflections toward Mecca, the world may wag along in its own way and be hanged for it.

The Hindus, like most tropical peoples, are personally extremely cleanly. Children seize every opportunity to plunk into the water of rivers and ponds as nimbly as frogs. Adults bathe daily, usually more than once, and in these ablutions the simple clothes they wear, if any, are included. The body is, therefore, at all times as clean as may be. Sanitary measures, however, cease at the surface of the body. The outside world is the domain of Great Brahma and the Hindu is not disposed to trespass upon his bailiwick. In the argot of the East it's a case of "no my pidgin." But without special irreverence one may say that neither Allah nor Brahma has done much to improve the sanitary conditions in the Indian environment, while the Chinese with their customary reliance on themselves have begun the creation of a system of scientific sanitation.

Although thoroughly aware of the necessity of strict precaution with regard to food and drink while in India I felt somewhat uneasy during my

stay in Benares and Allahabad in the midst of a great religious pilgrimage to those sacred cities. About 2,000,000 natives from all parts of India came to pay their devotions to the holy Ganges, bringing with them innumerable cases of cholera and smallpox. Deaths from cholera in Allahabad were reported to be 600 a week. There was no pretense of quarantine so far as I could learn. Indeed cholera, smallpox and plague stalk through the whole country, being most prevalent in urban areas.

The calmly fatalistic attitude of the populace toward these terrible diseases is more easily understood if we remember that Mahatma Gandhi, revered by the majority of Hindus as the patron saint and the living embodiment of their racial traditions, rejects with angry scorn all western science, especially western medicine as nonsense and irreligious propaganda. The illiterate Hindu, imbued with the fanatical fervor of a holy pilgrimage to the sacred Ganges, can hardly be expected to discountenance the pronouncement of their great leader and pin their faith to permanganate of potash, formaldehyde, vaccination and boiled water.

At the burning ghat in Benares on the sloping bank of the Ganges, where the bodies of the dead are cremated in the orthodox, ceremonial man-

ner, one may observe other customs not in accord with modern ideas of sanitation. Pilgrims wade into the river, dip up a cup of the sacred water, drink a portion of it and pour back the remainder. The water is of about pea soup consistency as a result of the high percentage of suspended silt and the animal and human excrement with which it is polluted along the entire length. Then, too, the bodies of persons who have died of smallpox are not cremated since it is believed that those who attend the funeral pyre would become infected. Such bodies are hence thrown into the river where they may be seen floating down the Ganges as far as Calcutta.

In 1928 the Royal Commission on Agriculture in India reported that sanitation is practically non-existent in the villages, that the public latrine is usually the river bank or margin of ponds or the use of the open field, with resulting water pollution, hookworms and amoebic dysentery. Wells were almost always unprotected and village streets unswept, while in early days the village ponds were cleaned and sanitary wells were sunk.

In many localities great difficulty has been experienced in persuading the villagers to permit health authorities to abate sanitary nuisances or to treat the breeding places of the malarial mos-

quito. All this description is of course based chiefly on conditions in prewar days.

In Burma the outlook is somewhat better. The Burmese are sturdier than the Hindus. Their diet is more adequate and their life expectancy is 32 years as compared with 25 for the Hindus. But while some improvement has been made in Burma in handling outbreaks of plague, cholera and malaria, the change has hardly reached the rural areas.

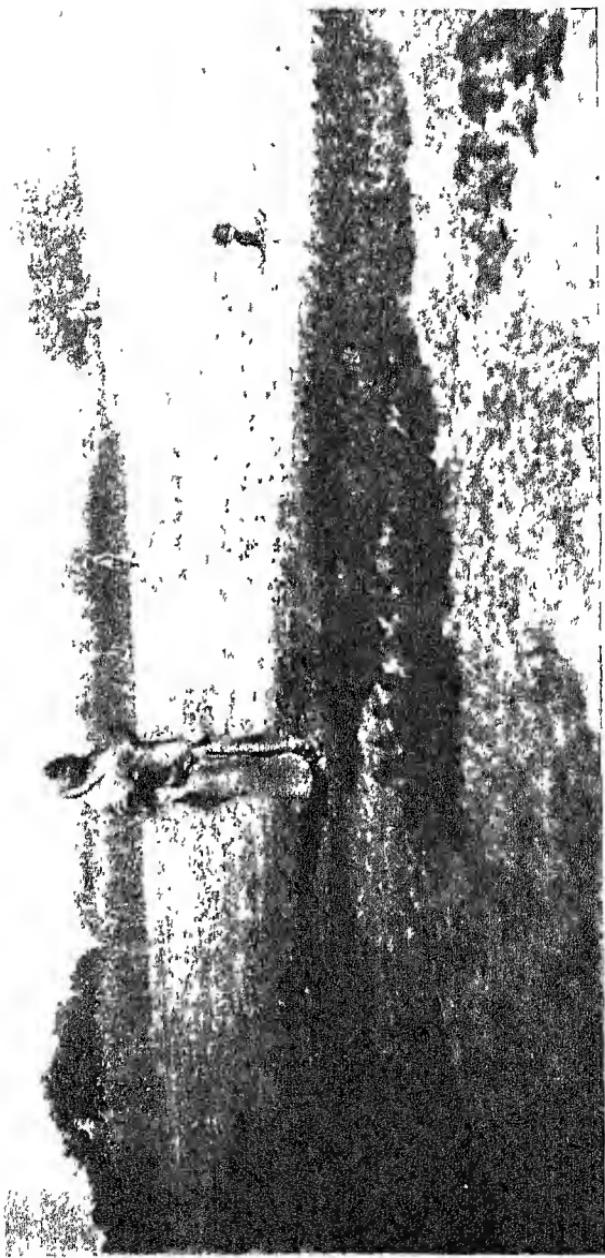
In pondering on this depressing situation in India one is constantly reminded of the almost inconceivably wide and deep contrast between the rich and the poor. And this gap between luxury and penury has been widened by the war. In the 1943 famine in Bengal in the midst of an abundance of food the tables of the rich groaned under the load of dainties while thousands died for lack of money to buy crumbs. The 562 princes who rule 80,000,000 people flaunt their strings of emeralds, rubies, diamonds and pearls, armies of servants and fans of peacock feathers while outside their palaces people die of cholera, malaria and starvation. And lest we might forget, we are asked particularly to remember the Nizam of Hyderabad with his 150 wives, coach of solid gold, two billion dollars in precious stones, \$250,000,-000 in gold bars and I have already forgotten how

much silver. Couldn't a few public sanitary engineering projects be included in his budget?

Viceroy Lord Wavell recently referred to this phase of the matter. "The pressure of increasing population, the small percentage of educated persons, the low standard of health services, the flagrant contrast between wealth and poverty, all mark the immensity of the problem which confronts India."

But government officials are prone to try to compass in their thoughts the whole economic, sanitary and educational situation in one sonorous and terrifying sentence. To improve the condition of 400,000,000 people at once would be a task for the Almighty. Instead of planning how to raise and support an army of high-salaried officials to do it all it would seem more reasonable to come down in a friendly manner among the people and help them to do the job little by little for themselves.

There are so many things to be done and so many places where a start may be made. Most schools in rural regions have no sanitary arrangements whatever. If in strategic centers of agricultural areas in various parts of the country the villagers and their children were shown the advantages of such facilities for decency and modern sanitation, the idea might spread in all directions.



GATHERING DUNG FOR FUEL IN INDIA

But experience has shown that it can be done only by personal contact, word of mouth or practical demonstration on the spot. Official proclamations are of little avail. Only a few people can read.

One of my informants in India, a man who had had experience in such work among the peasants, assured me that for genuine progress it is necessary to engage the interest of native villagers to make these demonstrations of new ideas or devices. The first step, he had found, was to get the people to come to village gatherings where simple plans of cooperation could be discussed. Illiterate people are shy of all forms of squirt-gun education. Official advice shot at them by long-range squirt-guns from government headquarters is looked at askance, or, what is more likely, never reaches the people at all. The suction method of getting their attention is much more effective. The inspiring and sincere social worker may easily induce the people to attend meetings to learn what he has to suggest. Even in the matter of animal diseases Indian farmers make little use of the available veterinary services and dispensaries, either from ignorance of the existence of such possible help, or from not being informed that they may ask for it.

Where illiteracy and poverty abound it is too

much to expect a decent standard of sanitation. The farm laborer's lot has not improved since 1900. The average Hindu ryot has experienced no substantial progress in his income or health. The poverty and joylessness of his life is not easily pictured without either falling short of actuality or overstating it. "His hut is seldom thatched and affords little shelter from cold and rain. His wife is in rags, his children without clothing. He has no furniture. An old blanket is a luxury."

But while the possible results from better sanitary and medical services in both India and China may stagger the imagination, we should perhaps take hope from the fact that these matters have received a stupendous impulse from war operations. Moreover the world has been slow to adopt sanitary measures. The Red Cross was not organized till 1864. The United States did not ratify the Geneva Convention for immunity of hospitals in war zones till 1882 after years of untiring labor by Clara Barton, the United States being the 32nd nation so to do, and after Turkey, Serbia and Bolivia had signed.

It is true that flies and house lizards or geckos are annoyingly common in India, and too often appear in the traveler's food, so frequently in fact that Mark Twain is said to have requested that his flies and geckos be served on a separate plate rather

than in his soup. But New Orleans and many other American cities are only a few years away from similar conditions. Nor are the villages of India more unsanitary or disease-ridden than her urban areas. In fact her cities are so overcrowded and unhealthful that very little exodus occurs from country to city. Tuberculosis has been one of the greatest scourges of India since 500 B.C. It is estimated that there are more than 2,000,000 cases today with 52,000 deaths annually from that cause, and chiefly in cities.

Still more distressing is the downward trend in the average span of life, the high rate of infant mortality, the yearly death of over 200,000 Hindu mothers in child birth and a volume of food production, sufficient, according to modern dietary standards, merely for a population 50,000,000 less than that of the India of today.

Likewise in China by reason of poverty and illiteracy among farmers sanitation and public health conditions received inadequate attention until quite recent times. The National Health Association was established at the birth of the Republic in 1911. In 1937 there were only 10,000 registered doctors and 5,000 nurses in all China, or about one per 40,000 population. In addition there are at least 100,000 old-style medical practitioners and about 5,000 herb doctors registered

with the National Institute of Health. These herb doctors employ thousands of vegetable substances, many of them of no therapeutic value. The government supervises the practice of herb doctors, inspects herb stores and tests the herbs used as medicines. The Chinese Red Cross was founded in 1904. During 1942 over 600,000 medical and surgical cases were handled by that organization.

Local departments of health have been set up in at least 16 provinces, the aim being to have ultimately a sanitary worker for each 15 families. Anti-venereal clinics are maintained and enormous quantities of vaccines and antitoxins are produced for the prevention of smallpox, cholera, plague, typhoid, diphtheria, and tetanus. Some of the plague outbreaks in 1942 were traced to the deliberate spread of the infection by the Japanese from airplanes particularly in Hunan Province.

The Chinese credit great importance to prenatal influence on the character of children. Good behavior of the mother during pregnancy is supposed to exert a helpful educational effect upon the child. Moreover the Chinese mother may nurse her children for two or even three years. But whatever the explanation may be they succeed in producing sturdy children even under the most unfavorable conditions.

For better or for worse the aggressive nations

of Europe and America are forcing themselves upon the attention not only of the primitive peoples of Africa and the Pacific Islands but also upon the illiterate or industrially backward populations of China and India. It was not to be expected that our bag full of tricky machinery and complicated gadgets as well as our array of pills and medical advice would be accepted *in toto* and all at once. We had not yet earned or deserved so much confidence on their part. They had suspicions as to our intentions. Their own ways had proved fairly satisfactory from centuries of experience. Even the magnificent medical institution established by American philanthropy in Peking was at first suspect. Was it an attempt to destroy the livelihood of the herb doctors? Was it safe to be etherized and undergo an operation by strange foreign physicians? The world-over such fears have been entertained and have required tact and patience on the part of social and medical workers.

But a tremendous elation and satisfaction await the pioneer with a real mission to help who devotes his efforts to the welfare of the Chinese coolies and farmers and lives to see the rapid progress they make and the gratitude they show for his assistance.

To visualize the situation that has latterly existed, picture to yourself a military feudalism with

almost every province at the mercy of a general who was an ex-bandit or on the verge of turning bandit. Read over the distressing accounts of floods, drouths, famines, earthquakes and appalling epidemics. And then notice that agricultural production has all this time been increasing.

Somehow the average Chinese has kept such a grim hold on health that anywhere in China or outside of his native home he will work longer hours and harder than any other race. But government is not in his line of accomplishments. The Chinese is a wonderful worker but, as proved by his past record, a wretched politician.

From whatever angle one begins the study of the economic and social troubles of China and India, the evidence points a finger at poverty, illiteracy and diseases. He would be rash who might dogmatize on which of the three is first or most important. Is a particular farmer poor because he is in bad health or ignorant or from some other cause? Or is he illiterate because he is too poor to obtain schooling or to buy books and papers? Deficiency diseases such as beriberi, osteomalacia and general malnutrition are wide spread. And most of those who suffer from malnutrition can not afford to buy a satisfactory diet, or are ignorant of ways to improve their diet by a better selection of garden vegetables. In desperate need farm

animals show man the way to eke out his vitamin requirements. The young, growing shoots of grass are as rich in vitamines as lettuce. Nature has provided hundreds of weeds that as pot herbs or greens will nicely supplement a rice diet.

In official comments on the backwardness of agricultural methods in India, attention is frequently called to the fact that the farmers understand little or nothing about the possibility of contagion from disease. But neither ignorance nor prejudice against modern science are incurable if the problems are attacked by patient and determined workers. Similar obstacles to innovations are met with in the most advanced countries. When our Bureau of Animal Industry began its campaign to eradicate the cattle tick, the idea was laughed to scorn by many trained veterinarians, and in various regions of the Southern States Bureau agents were at first blocked by squads of enraged farmers with shot guns and warned not to commit any such arrant nonsense on their premises.

Down in southern India Dr. Hatch by showing his sincerity and faith in his own plan has overcome prejudice and suspicion, inspired the people of all castes and religions to work together in developing a decent sanitary system in their community. And in China Dr. James Yen has greatly

extended the practice of vaccination against small-pox and many other practical measures of sanitation, while at the same time introducing the use of improved seed, thus raising the income of the farmers by 20 percent, and popularizing a simplified or basic form of the Chinese language whereby millions of Chinese have learned to read and write.

The educational, economic and medical dol-drums in which India and China have been marooned for centuries are apparently somewhat like the familiar log-jams in rivers, where innumerable logs were wedged into a seemingly immovable position. But it required merely a man with the nerve and skill to loosen the key log to set the whole mass moving merrily down the river.

V

ILLITERACY AND EDUCATION

To those of us who live in communities where a person who can neither read nor write is an oddity, it comes as a distinct shock to be reminded how comparatively recent in the history of mankind those elementary accomplishments were not found outside of the priesthood and a small number of the nobility. It was not considered necessary even for kings to be able to read. King John was illiterate and signed the Magna Charta in 1215 with a seal. Among the ancient Egyptians the scribes were excessively proud of their ability to read and write as attested by the custom of including rolls of papyrus among their burial objects beside their mummies to prove their literacy to Thot, the god of writing, when their spirits appeared before him. Literacy was quite general in the population of Athens at the time of Pericles and also in Alexandria. But elsewhere up to that time there was almost total illiteracy the world over except among a very limited class. The rulers and aristocracy of Rome never tried or thought of spreading education among the people. Through-

out the middle ages the hierarchy of the church monopolized Christian literature. All it was considered that the common people needed to know was told them by the priests. Even in the first World War about 25 percent of U. S. soldiers were found to be functionally illiterate. And of the total world population of something over two billions today more than half of them are illiterate, 350,000,000 of them in India alone.

From almost universal illiteracy to the present condition of the world has been a long and tiresome journey. Until after 1500 A.D. for 99% of human beings the ability to read would have been a wholly useless accomplishment. There was nothing for them to read. Manuscripts on oiled palm leaves, or rolls of papyrus or on the musty parchments of monastic scriptoria were too rare and expensive for the common individual. And besides, they were written in Sanskrit, or hieroglyphics, or Manchu characters or in the curiously complicated letters of priestly art. Why should the farmer or shoemaker or wheelwright strain his eyes trying to decypher such weird pictographs, which after all had nothing to do with the affairs of this world? Lords of great manors, princes and the upper ranks of the clergy saw no reason for doing so. They employed scribes, notaries and monks to do such menial work. In India today

there is a higher percentage of literacy among the merchants and the professions than in the upper castes. And in China where the great majority of the people are farmers, the first farm paper ever to be published made its bow in 1927. The ruling class in most countries until recently knew little or nothing about agriculture and therefore left that vocation to the farmer himself.

Even the art of printing was not looked upon at first as having any bearing on public education, but was merely a means of reproducing old manuscripts with fewer errors than by the handwriting of the scribes. Not until 1800 had the habit of reading percolated below the middle classes. Even in England a stamp act designed to control and censor the press was in effect until 1855.

Rulers were afraid to let people learn how to read. They might absorb ideas and think. Thinking was considered dangerous and hard to regulate. Even today there is no such thing as free access to the books and newspapers of the world in Germany, Italy, Japan, and Russia. There is not a privately owned newspaper in Russia. Some religious hierarchies still blacklist whole categories of books and newspapers as forbidden reading for their priests and communicants. It required the seething indignation of Martin Luther to make

even the Bible available to the common man of the street and countryside.

Perhaps therefore we may well be lenient in our condemnation of the Indians and Chinese for the degree of illiteracy that has prevailed in those countries all these 40 or more centuries. It was only yesterday, as measured by a historic yardstick, that we emerged from that condition. They may join us tomorrow.

Many efforts in India to provide reading for the populace have been misguided, sometimes inane. For example, the Buddhist scriptures were originally written in the Pali language, a colloquial dialect of Sanskrit, but on palm leaves and not available to the public. Since there were no printed editions of these writings the complete text was engraved on stone tablets about 4 by 6 feet, each tablet set up erect under a coping. These tablets cover about 4 acres of ground in the city of Mandalay and constitute a quite unique outdoor religious library. But after this immense undertaking was completed it was found to be perfectly useless for the simple reason that the Burmese understand not a word of Pali.

With a few exceptions the princes of the 562 Indian states want the status quo continued. They are mostly autocratic and keep their 80,000,000 subjects ignorant of outside doings in the world.

"They owe their status to Britain" says Gandhi "and have no status otherwise. They represent nobody but themselves."

There seems to be little unity of opinion in India as to the aim of any system of education which might conceivably be adapted to the needs of the Hindu peasant. A spokesman for the British government insisted to me that all educational powers must be resumed from the local bodies by the provincial authorities and "that there are certain fundamental principles which must determine the training of the future citizen in all parts of the world."

On the other hand the usual approach of government authorities armed with fundamental principles was humorously ridiculed by many villagers. Such extension education was depicted as "a dust-raising once a year. Students and well-intentioned adults visit the villages, sweep the streets, clean the surroundings of a well and give a series of lectures on how to eat a well-balanced diet with plenty of milk, and how to rear and educate children. This program brings a bit of diversion to the poverty stricken villagers but most of them regard such visitations as nuisances." They are followed by the protagonists of government rural reconstruction with trumpets blowing with an army of camp followers and truck loads of farm

implements too expensive for the peasants to buy.

Neither preaching nor prodding brings worthwhile results. The ryots are far more likely to accept the teachings of a leader who lives his life among them. It's a painfully slow method but exerts a more lasting effect. The glamor of occidental culture with its over-stimulation of a multiplicity of wants may seem attractive but the Hindu peasant is not yet ready for it.

There are problems much nearer home that the peasant feels more poignantly. Of the 3,500,000 boys in British India who annually begin the four years of elementary schooling, only 500,000 or one in seven finish the course. Only a few children are able to attend school more than two years.

Many of the Indian princes have calmly admitted that their rule might be undermined if they allowed the people to become educated. But to my way of thinking freedom of opportunity to secure an education must be open to all native races. No European nation can indefinitely hold the respect and loyalty of a colonial people unless the door to advancement is wide open to their developing skill and talent. The day is past when we may say that native races can attain only the mental stage of 12 to 15 years, and can hope for nothing beyond. Intelligence tests show no uni-

formly superior intellectual capacity in the white race over the yellow, brown or black.

It is doubtful if more than two percent of the women of India, either Moslem or Hindu, can read and write. I found villages where there was not a single literate woman. The functions of women have been to look pretty and bear children. Many women are still in purdah, veiled, and not allowed to see any man but husband and relatives. With a bit of schooling and freedom of contact with the world they could and would be of immeasurable service in guiding the education of their children.

In former times village teachers were village folk and lived among the villagers. Today the teachers come from urban sources and remain aloof as far as may be. Whether it was intentionally so designed or not the British system of education trained Indian boys to take minor government positions and be well-disposed toward British methods. Too many have been educated in that direction. There are not enough clerical positions for the increasing army of B.A.'s, many of whom have developed into mere snobs, unwilling to go back to the villages from which they came and apply such talents as they have where they are most needed. The population is instinctively rural

and probably must remain so if what is best in Hindu civilization is to be preserved.

"In the turmoil of political agitation" Devaki Prasad Sinha testified before the Royal Commission on Agriculture "the government has abandoned interest in agriculture. The present unrest is rooted in the degradation of millions of India's poor, while the government is busy evolving formulas to pacify the politically minded, and landlords are demanding the payment of rent in advance."

The peasants feel that the net result of education is to make agriculture a discredited profession. The better young men leave farming to become clerks. Many parents regret having given their sons an education. They will not come back to agriculture nor can they always find other employment.

By reason of the high birth rate and lag in school attendance a curious situation has come to pass in India. Illiteracy is declining percentagely but increasing in absolute numbers. Between 1921 and 1941 there was an increase of 5 percent in the number of people able to read and write, bringing the total literate up to 12 percent. But in 1921 there were 315,000,000 illiterates and 341,000,000 in 1941.

To keep step with the birth rate and prevent

falling further behind, India must add 3,500,000 annually to her number of literate citizens, whereas the present record is only a million a year. Indian statistics are rather fragmentary but it appears that there are about 190,000 primary schools with an enrollment of 12,000,000 (9,000,000 boys and 3,000,000 girls).

If the powers that be should decide that the first step in alleviating the sorry state of the Hindu peasants is to make more education available to them, then it's high time to begin selecting the teachers to carry the message to them. Education is a vague, general term that means something different to almost every human being. One homespun, practical definition of an educated person is an individual who has found out most of the ways in which men have made fools of themselves and has acquired an aversion to those ways. It would seem possible to focus attention on a few simple, very specific and feasible things needed at once without losing sight of the long range goal. A number of Hindu boys were sent to American Agricultural Colleges to learn from us new methods which might revolutionize Indian agriculture. But the practices that fit a 200-acre farm are utterly inapplicable to a 5-acre holding split up into 6 pieces and devoted to crops for the most part not grown in the United States. As should have

been foreseen, the first agricultural graduates who returned home from the United States found little in Indian agriculture to be proud of, and grumbled and complained because they were not listened to nor understood. Workable farm methods for the peasant farmer of India must be based on experiments on small plots of land with Indian crops under monsoon weather conditions. The methods of the Nebraska or Texas farmer have no place on the microscopic land fractions of the peasant in the Province of Bihar or Orissa.

From the Indian standpoint Dr. S. P. Mukerjee has explained how the present educational system of his country came to get started on the wrong foot. Back in the early 1800's when pedagogic formulas were in a formative state in most countries, "there was evolved a system largely dissociated from the cultural tradition of the people and which made an alien language the vehicle of new ideas that were expected to regenerate the people of India. This system was based on a class conception of education. The new education was to be confined to the upper classes and was to filter down in time to the masses." But this filtration plant idea didn't work. A few handfuls of upper class young men received instruction and the peasant has been almost totally neglected as shown by

the existence of nearly 350,000,000 illiterates in India today.

The so-called Wardha plan, advocated by Mahatma Gandhi in 1937, proposes seven years' schooling beginning at the age of seven, instruction being given in the vernacular of the region, without the use of English, with emphasis on cooperative associations, and with Hindustani as the national language to be a compulsory subject in the seventh grade.

There is nothing inherent in the Indian peasant that prevents him from being an efficient farmer. But, as suggested by W. I. Ladejinsky, the lack of education, the limited application of agricultural science, the land tenure system with its onerous taxes and usurious interest rates, the fractionization of land holdings, religious prejudices and caste customs that do not permit a balanced diet, all combine to make his output small. And this distressing list of hurdles can not be eliminated till the illiteracy so almost universal among the peasants is displaced by an education suitable to the needs of agriculture. Education would therefore appear to be the key to any substantial progress among the peasantry of India. Many observers have come to the same conclusion and have announced their findings in more or less emphatic language. Several years ago the Royal Commis-

sion on Agriculture proclaimed "We desire to emphasize our considered opinion that illiteracy presents the most formidable single obstacle to rural development."

For 150 years this idea has been enunciated from time to time. Attention has been called to the lack of education among the Hindu ryots and to the fact that no adequate education was within their reach. But until words are translated into action, they are just so many words, just an endless repetition of Hamlet's indecision

"And thus the native hue of resolution
Is sicklied o'er with the pale cast of thought,
And enterprises of great pitch and moment
With this regard their currents turn awry
And lose the name of action."

In the Indian census of 1921 the illiterate, excluding children under 10, were 93 percent of the population. They still accounted for more than 90 per cent in 1928. "The real crux of the matter then is that over 90 percent of India's farmers cannot be reached by the printed word, and that illiteracy stands as a barrier between them and every branch of useful knowledge. Moreover, the fact that the government spends only 5 percent of its revenue on education does not augur well for the elimination of this obstacle that prevents pro-

gressive development in the country's agricultural economy."

The Royal Commission urged that "a most determined attack be made upon illiteracy." It has also been suggested that if the mother can read and write she will exercise an influence in keeping her children in school. About 97 percent of Indian women are illiterate. That in itself presents a stupendous problem, complicated by the further fact that many parents manifest an unwillingness to send their children to school, which in turn is attributable to the notoriously wrong methods and poor quality of the instruction offered in village schools.

There were remedies galore for this situation but they were all locked up in official bulletins and reports. How to get the remedies to the people was the question. Dr. Spencer Hatch in his work in southern India found one way out. Since illiteracy was so rife, there was obviously little use in distributing printed matter. Even the government demonstration farms, which had been established in all parts of the country, entirely failed to accomplish their purpose. They exercised next to no influence upon the peasants who quite naturally were not impressed with what they saw done on government-financed show farms on specially selected land. But small demonstration plots

on actual peasant farms produce results that are quickly noticed by the farmer and are convincing, especially when the demonstrators are on the plot to answer questions.

As far as Chinese government officials were concerned the farmers of China down through the centuries were considered able to look after themselves and little or no attention was given to their education. Agriculture was looked upon as a noble occupation but poverty bound its shackles firmly upon them.

In tracing the educational progress in China we are at once reminded of fundamental differences between China and India. The East is far more heterogeneous than the West. Europe and the Americas are all built on an occidental plan that has become more and more standardized as the years of close relations have rolled along. But China is as different from India as Switzerland is from Turkey. India has always looked toward monarchy or a theocracy in which the individual bows subserviently to authority. The Chinese are so individualistic that no strong central government could be established. Each community jealously preserved its freedom from the interference of central authority.

From the time of Confucius education has been a veritable passion among the Chinese. The son of

the lowliest coolie could aspire to the position of highest honor if he evinced the requisite qualifications, and many of them achieved that ambition. The hopes of Dr. Sun Yat Sen and the revolutionists in 1911 were of course fantastically enthusiastic and utopian with 80 percent of the people illiterate and with gigantic vested interests to contend with, foreign complications, no national consciousness, and with feudalism, communism, autocracy and republican ideas fighting one another for recognition.

But the Chinese have the old adage "from intelligence and morality wisdom is born. From wisdom come peace, harmony and happiness." It is at bottom Confucianism which is the unifying element in China and has always set a high premium on intelligence and practical wisdom and has identified the beautiful with the true, wise and ethical. But until Sun Yat Sen rudely disturbed the somnolent inertia of those changeless centuries of old Cathay the lofty educational program was mostly flowers and rhetoric as far as the peasant could see. But the picture is different today. Things have begun to move. Women are being emancipated rapidly. There are already 50 women's magazines in China.

"Chinese culture" says Chin Li-fu, the present minister of education "does not indulge in the



PICKING COTTON IN INDIA

vague and aloof, nor in study for study's sake. It attempts to find a balance between extremes, between the old and the new, between the physical and mental, to effect self-control and mutual tolerance."

New developments often arise from some incident apparently far removed from the problem in hand. So it was in the latest upward thrust of popular education in China. During the first world war 200,000 illiterate Chinese laborers were brought to France for work behind the lines. Not being able to read or write home or learn any news from home, they became homesick and much discontented. Dr. Y. C. James Yen, who has since become director of Chinese National Association of Mass Education, went to France for service among the nostalgic coolies. Dr. Yen began writing letters and translating military bulletins for them. But requests for his services in writing letters soon exceeded human endurance, 100 or more letters a day. In sheer self defense he started teaching them how to read and write for themselves. Within a short time many of them had "graduated" into literacy, ability to write a creditable letter and read a news release. As soon as he had 2,000 such graduates he started a Chinese newspaper in France.

Returning to China, Dr. Yen felt keenly the

great chasm between the educated few and the illiterate millions. Coming into intimate contact with coolies he accepted the challenge to find a way of bringing education to them. These coolies constitute 85 percent of the people of China. They don't lack brains. They lack only opportunity. But the old form of printed Chinese with its almost innumerable and complicated word signs was too slow and tedious a task for the coolie to learn outside of his working hours. Therefore Dr. Yen perfected a system of basic Chinese with the minimum number of characters necessary for ordinary intercourse about every-day affairs. This basic Chinese may be mastered in 96 hours of actual study and the cost is ridiculously low. Already 47,000,000 people have been taught to read by this method. So enthusiastic has Dr. Yen become from the rapid spread of the system that he talks of wiping out illiteracy in China within 10 years.

Offhand that sounds rather unduly optimistic, but the movement is self-spreading. To test its further development Dr. Yen chose a location where he might try to create a school system for the common people, 65 educators being asked to help in the enterprise. As might have been expected only 20 of these were happy at this new kind of school work. The others couldn't make workable contacts with coolies. Boys taught in

this school have already helped found 500 peoples' schools where 80,000 persons attend the courses. They have instituted radio programs, dramatic clubs and newspapers. Fearing that the farmers might become discontented and turn against the school program if no improvement in their economic condition came about as a result of education, Dr. Yen by means of the use of better cotton seed increased the yield 20 percent and by selection of layers and crossing raised the average annual egg production from 58 to 125 eggs per hen.

Among the men who came to assist Dr. Yen in his educational campaign was a university professor who had been teaching agriculture for nine years but had never seen a Chinese farm. Such cases clearly illustrate how government officials and professors in higher educational institutions may appreciate the importance of agriculture, may carry on scientific research on farm problems and issue a stream of bulletins without reaching down to the farm at all. The first step is to see to it that the farmer can read, then visit his farm, kick up a bit of soil with the toe if he failed to bring a soil auger, notice the quality of the crops, pigs and chickens and incidentally inspire the farmer with faith in the common sense of the professor and in the soundness of his proposals.

A hint as to the seriousness with which the Chi-

nese are attacking their school problem is furnished in the latest reports from the interior of the country. In 1943 there were 133 universities and technical colleges in China as compared with 108 before the war with an enrollment of 58,000 students. Before the war there were no colleges except in the coastal provinces. Now these institutions are distributed throughout the country. Some of them have been bodily transported 1500 miles into the interior, buildings, books and scientific apparatus. The professors and students lent a hand in this work which was carried forward under constant air attacks by the Japanese who tried to destroy Chinese schools root and branch.

And in the midst of the privation and ravages of the war, that lasted seven years in China, there are 53,000,000 pupils in their primary schools, while 140,000,000 illiterates between 15 and 45 years of age are receiving some schooling.

The items on the present agenda in China in the order of their importance are education, livelihood, health and citizenship, as the Chinese see their needs. Education is aimed and intended to open the door to a better livelihood, better health and a keener interest in good government. By contrast an Indian leader referring to the situation in one of India's villages laments "the heart-rending spectacle of a villager with a smattering of the

three R's seeking to become a clerk in some city office. This wrenching of men away from their natural inclinations has come about by the present system of education which has no root in the life of the people." And General J. F. C. Fuller, looking at the problem from another viewpoint concludes that "democracy and theocracy are two world orders that refuse to amalgamate. They are as immixable as oil and water. Until India is de-theocratized democracy is no more than a will o' the wisp."

From my own observations in China and India, from reading scores of articles in current periodicals by Chinese and Indians and from conversation with social workers and agricultural authorities just returned from those countries, it seems evident that the problem of illiteracy is understood by leaders in both India and China but that the Chinese are attacking the matter in a much more aggressive and fruitful manner, and be it remembered, even in the horrors of a Japanese invasion. It may be too much to hope that all Chinese will be able to read and write within ten years but they are on the way out of the darkness of illiteracy, and the people themselves, millions of them just emerged from illiteracy, are enthusiastically carrying the movement forward.

IV

SOILS AND THEIR PRESERVATION

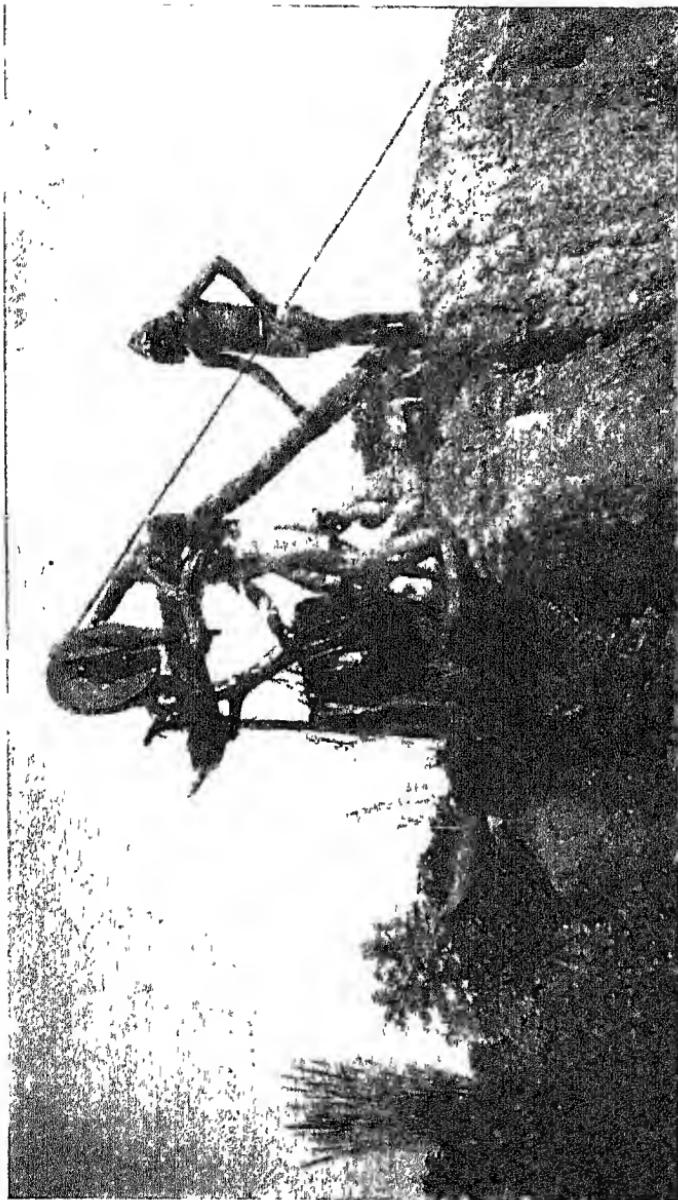
The history of civilization is the history of the soil, and the education of the individual begins with the soil. For 50 years I had had my feet on the soil and my hands knew the feel of it. I had observed how nature strives to heal every ugly wound that man makes in the soil with a protective cover of grass or other herbage or trees. I noticed how different sorts of trees and plants are indicators of the kind of soil they prefer, how winds and rain and rivers loosen the soil from its bed and carry it away to deposit it in lakes or oceans, or in dunes.

But my first view of a religious ceremony connected with soils was in Siam. The spring plowing festival takes place in a large park-like area in the City of Bangkok. Here the people, including hundreds of rice growers, assemble to see the Minister of Agriculture, dressed in full regalia, hold the plow handles while two sacred bullocks, decorated with ribbons and other paraphernalia, and duly blessed by both a Brahmin and Buddhist priest, turn a furrow as a symbol of the opening of the

Spring season. And again in the old Mayan empire of Yucatan I saw the descendants of that ancient race offer prayers and apologies while asking pardon of the god of the soil for disturbing his quietude under the necessity of plowing and planting seed to gain their future food supply. This reverent attitude toward the soil seems appropriate in view of its transcendent importance to all life on the globe.

For men as well as for nations adjustment to the soil is the only anchorage to life. In any civilization there comes a time when this adaptation is vital. Its armies, its livelihood depend upon the reverent care of the soil. Deserts have succeeded to cities because cities forgot the soil. "I can not believe," exclaims the Earl of Portsmouth, "that the Golden Age is a myth of superstition or a figment of idealists. I believe it to be a race memory, well nigh universal, of times when various peoples had achieved a way of living in harmony with nature, when they possessed the secret of partnership with the soil so that health, gentleness, beauty and strength were the rule. The memory was nearer to the Egyptians, Greeks and Aztecs than to ourselves." In the words of Job it was "when the morning stars sang together and all the sons of God shouted for joy."

In all seriousness soil should be approached rev-



COWHIDE BUCKET FOR IRRIGATION WELL IN INDIA

erently not as a mass of dead dirt on the outer surface of the earth but as the basis of life. If the soil has been abused and its fertility senselessly depleted, the crops it bears are not full flavored nor of optimal composition. If the crops are pale starvelings without their normal content of vitamins and nutritive elements, the milk from cows that feed upon such clover and corn is deficient in vitamins. Such failure to care for the soil ends in pills for the body and quack religion for the soul, and we are full of medical knowledge without health.

The soil is not merely a convenient material in which we insert seeds while we wait for the crop to appear. It must contain an adequate supply of the mineral and other elements that are essential to the growth of plants. Nitrogen, phosphorus, potash and lime are the first to come to mind, but sulphur, magnesia, iron, manganese, soda, copper, boron, zinc, titanium, even lead and arsenic and selenium seem required for some plants, most of the less important elements only in mere traces. Carbon, hydrogen and oxygen are derived from the air and water. Obviously the soil can not indefinitely maintain a high degree of fertility if these elements are continually removed by leaching, erosion and crop production or otherwise, unless they are replaced.

Not only do soils require attention to their content of plant food but they will bear close watching lest their attachment to the farm is loosened and they slip away on a long journey down the river to be deposited in the ocean bed or are whisked up into the stratosphere by gusts of wind and float away to some unknown destination. For soils are migratory and the only way they may be successfully anchored is by the roots of the vegetation that grow upon them. The soil cannot be thought of except as the nursing mother of plants. Plants in turn have two motherly functions, to hold the soil in place and to nourish animal life.

It is by no means a mere blind thrust into the silence of prehistoric times to assume that when man first appeared on earth he found everywhere a carpet of grass or shadowy stretches of forest trees. There were few if any patches of bare earth. From the frozen tundras of Siberia to the liana-bound jungles of the equatorial regions some form of vegetation brooded over the soil and from season to season added to its fertility.

Thus far in this volume we have been talking together about the people of China and India, two densely populated countries in which historic records run back unbroken for 40 centuries. Their handicaps of poverty, disease, overcrowding, deficient diets and illiteracy have forced themselves

upon our attention along with evidence of whatever success they have had in overcoming those difficulties. To have survived at all is an achievement of which they may be proud, and automatically focuses attention upon the systems of agriculture by which they have been enabled to travel this long stretch along the road of human history.

Looking first at China the occidental observer becomes amazed as he slowly gathers the proof that large areas of soil have been continuously in crops for 4000 years without declining in fertility, in fact showing today larger yields than the earliest records that can be positively authenticated.

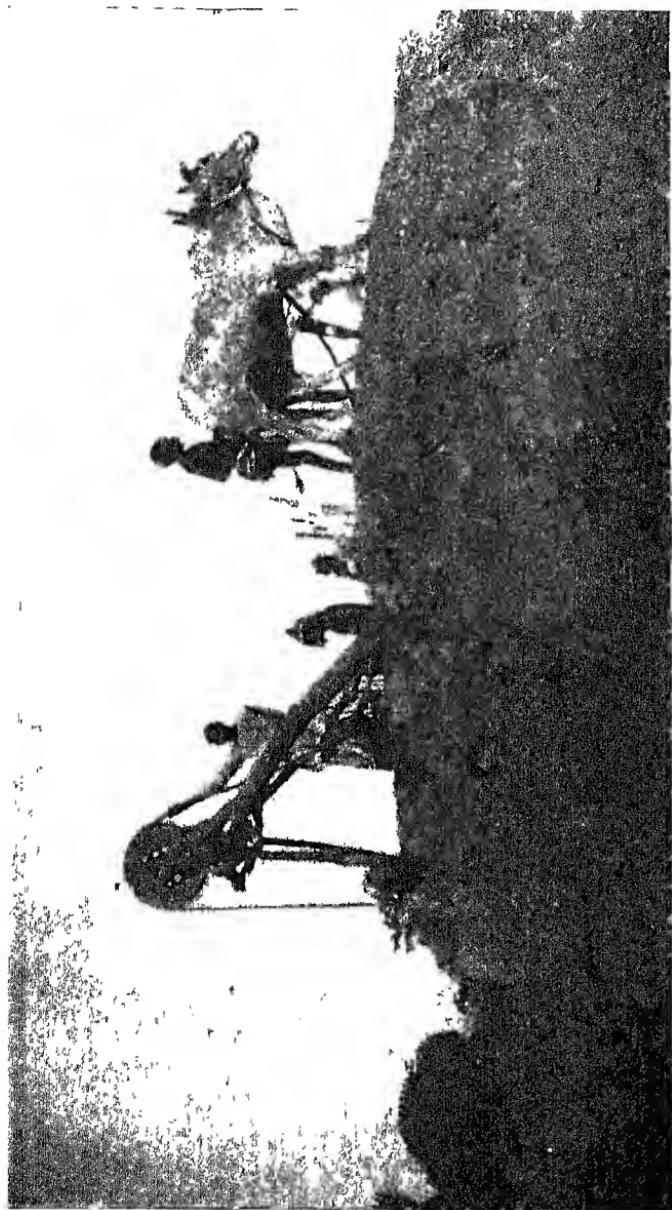
How has the productivity of the soil been maintained? It has been estimated that 1,700,000 tons of phosphates are annually removed from the soil by the harvested crops in the United States. Wheat and corn are chiefly concerned in this process. Corn is largely fed to animals and their manure, carrying most of the phosphates in the corn, goes back to the soil. Wheat on the contrary is mostly eaten by man and in the United States and most countries its phosphate content is permanently removed from the soil. But in Chinese agriculture all liquid and solid human excrement as well as that of animals is returned to the soil. The Chinese carefully save all organic fertilizers, reduce them mostly to a liquid form and by tedious

hand methods pour the material along the rows of garden crops and also on wheat and cotton. So far as I ever observed this liquid fertilizer does not come in contact with the plants.

In addition to human and animal excrement and urine, immeasurable quantities of compost are compounded of the odds and ends of crop residues, kitchen waste and wood ashes, and applied to the soil. China being the soybean empire of the world, no part of this basic farm crop is overlooked. Soybean cake figures prominently in the fertilizers used on rice and wheat but manures are the favorite Chinese applications to garden crops.

There can be no doubt that the high value assigned by the Chinese to compost in maintaining the fertility of the soil is rightly placed. They knew that compost added humus to the soil, that by some unknown action it rendered other plant food in the soil more available, that it kept the soil porous and friable, more retentive of water and at the same time, through the process of capillarity, supplying moisture to the delicate root hairs of crops more uniformly, especially in times of drouth.

The Chinese farmer was not interested in the technical scientific explanation of the benefit derived from compost. If he had asked for such an explanation, there was no one who knew. Quite



PRIVATE IRRIGATION WELL IN INDIA

recently, however, one reason for its effect on crop production has been discovered. Many soils under certain conditions, especially cold weather, waterlogging and lack of aeration develop a toxicity that is imminent to the plant growth. The toxin may be destroyed by heat or drying. But compost has the same effect almost immediately and of more lasting duration. Compost has been demonstrated to promote the growth in the soil of thread-like fungi which are essential to its maximum fertility. Since 1937 the Japanese have forced the Korean farmers to grow what crops they could without compost or other fertilizers, with the result that yields per acre have already declined over 33 percent.

Likewise India is deficient in her food supply. Her cultivated acreage needs to be expanded or her acre-yield increased or both. From the present number of 200,000,000 cattle the Imperial Council of Agricultural Research estimates that 560,000,000 tons of cow dung per year is burned for fuel. This is a loss of fertility which India's soils can ill afford to bear. Giving manure the ridiculously low value of \$3 per ton to the enormous quantity burned as fuel it amounts to more than 30 times as much as all the artificial fertilizers used in India. Evidence from experiments on peasant farms show that $3\frac{1}{2}$ tons of cow dung per

acre, a by no means heavy application, nearly doubles the yields obtained at present. It would seem easier to find a substitute fuel for dung than to find a substitute fertilizer.

The seriousness of the soil problem in India is apparent from a comparison of yields with other countries. The average yields of cotton, rice and wheat in China are double those of India. The national peril in the offing has been well expressed by G. T. Wrench. "The need of soil preservation, the care of its fertility, is evident to many British administrators. The peasants may be rehabilitated as part of the conservation of the soil, the real foundation upon which the whole social superstructure rests. What is the service of thinkers? They have been and are a power. But they should realize that if a civilization is such that it degrades the soil then it is the civilization not the soil that comes to an end."

The problem of loss and devastation of soil by erosion arose in both India and China in the same manner and from similar causes. The mountain hillbilly tribes of India especially in Bhutan and Nepal in the foothills of the Himalayas have been left largely to their own devices. The British have hesitated to interfere with them. As their numbers increase they clear more forest land by the ax and fire, using the new land for crops or pasture.

They are rather footloose nomads and abandon these clearings within a few years for other locations. Consequently under the annual monsoon rainfall of 250 inches in these high Himalayan catchment basins great gullies are formed by the dashing mountain streams, the underlying rocks are denuded of their soil covering, and this soil in constantly increasing quantities is carried down into Bengal. In 1650 Bengal Province was described by eye witnesses as more abundantly fertile than the Nile Valley. Calcutta once abutted on a bay but it is now miles up from the mouth of the Ganges which flows through a channel between mud banks of silt from eroded mountain land. And today there is general agreement that the soils of Bengal are deficient in plant food materials as a result of leaching by the monsoon floods and from their lack of nitrogen due to the scanty use of animal manure. "The soil reached its state of maximum impoverishment many years ago."

In China the great drainage systems of the Hwang Ho and Yangtze Rivers rise in the Kuen-lung Mountains of Tibet. China never had complete control of that region. Heavy spring rains and melting snows of hundreds of feet depth provide flood water that rushes down the mountain slopes carrying silt, sand and gravel to the valleys below. Even boulders up to a foot in diameter

are rolled along in the stream beds. The pastoral tribes in the upper reaches of these rivers are notoriously indifferent to soil preservation. Forests are felled, land cleared by fire, and when the grass cover appears, it in turn is destroyed by overgrazing. Such tribes of nomads have created dire trouble for farmers not only in China and India but also in Persia, Iraq, the Near East, and elsewhere. In fact, the world over, river-borne silt automatically limits the useful life of irrigation dams. No matter how high these dams may be, sooner or later they are doomed to become completely filled with silt and therefore useless.

The serious problem presented by the Yangtse River is described by Shao Shang Lee:—

"In the autumn of 1931 came the great Yangtse River flood, which affected nearly 25 million people. To keep the river from overflowing again strong dikes were built. Under the leadership of Sir John Hope Simpson and some two hundred Chinese engineers, a million Chinese laborers within six months repaired and built 1,473 miles of dikes and completed 73 miles of new channeling work to improve drainage. Many of the dikes were 140 feet broad at the base, 30 feet thick at the top, and 30 to 50 feet high."

Perhaps the most famous case of the silting of river beds by the deposition of soil carried from farther up stream is the Hwang Ho, or Yellow

River, known as "China's Sorrow." Dr. W. C. Lowdermilk spent five years or more studying the cantankerous behavior of this river and has presented in various government publications the essential facts of its long recorded history. Even the tourist, who crosses the Yellow Sea in a coasting steamer and notices that for a hundred miles out from shore the water is a sort of tawny consomme, begins to ask questions about the doings of the Yellow River. And should he sojourn in Peking in mid-winter and acquire what feels like a burning nasal catarrh he will be told if he consults a physician that the trouble is due to minute silica crystals carried by the north west winds for hundreds of miles from the great stretches of dry loose soils along the upper Hwang Ho. In fact the atmosphere is distinctly yellow from the fine particles of this soil.

As Dr. Lowdermilk describes his first sight of the Yellow River, "Here lay the river in a channel 40 to 50 feet above the plain. This gigantic river had been lifted up from the plain over its entire 400-mile course across the delta and had been held in this elevated channel for 600 years by hand labor, without machines, engines or cable. Millions of farmers with bare hands through the centuries had built this monument to the will to survive. For 4000 years the fight had gone on,

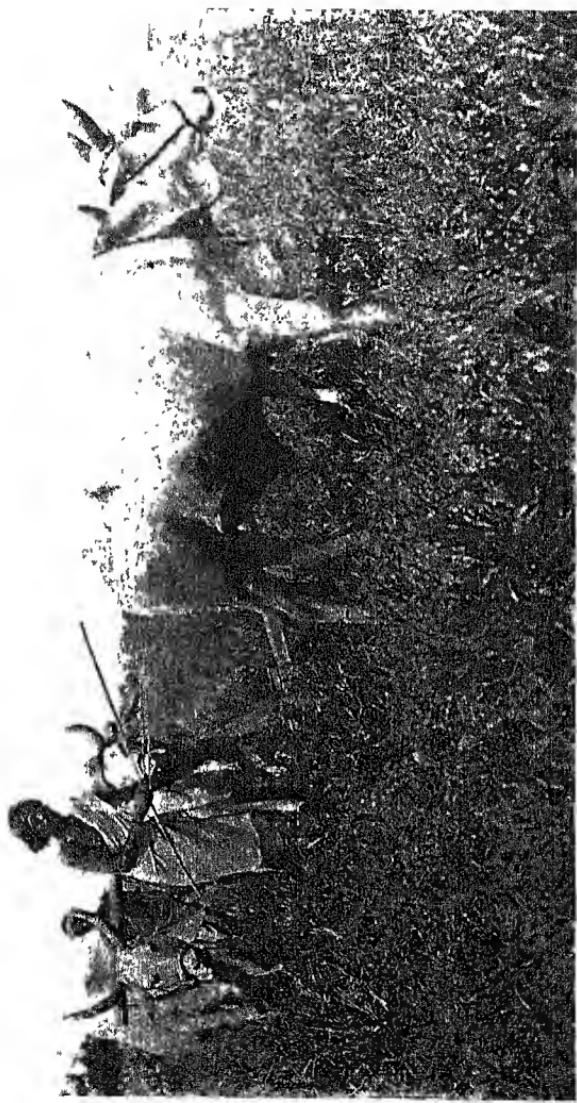
building dyke after dyke to hold the river in bounds.

"All this time as the river heavily laden with brown soil from the highlands reached the sluggish slope of the delta, the silt fell to the bottom and so ceaselessly lifted the river bed. Year after year the farmers must build the dykes higher and higher. In 1852 after being held in the same series of dykes for 600 years the river broke out of its elevated channel and raged across the Province of Honan to the Gulf of Chihli 400 miles north of its former outlet."

If one desires a demonstration of a similar process nearer home he has but to travel along the Mississippi from Memphis to the Gulf of Mexico. The Father of Waters often breaks through the dykes and floods thousand of acres.

Likewise in India, particularly along the Jumna River Valley, floods have gullied large areas of farm lands cutting the country into series of ridges and deep ravines impossible to till. In the Deccan region the fields are so badly scoured by the monsoon rains as to substantially reduce their productivity, the soil loss even on gentle slopes being estimated at 50 to 150 tons per acre annually.

Methods for successfully controlling erosion have been put into practice here and there in India and China. On a large tea plantation near Dar-



PLOWING WITH CROOKED STICK IN INDIA

jeeling at an elevation of 7,000 feet and with a heavy rainfall the slope of some of the tea gardens is so precipitate that one needs a cane or alpen-stock to get about. The land was so terraced and the tea bushes so spaced as to prevent erosion, even where land slides occurred on the steepest declivities and the soil could be held in place only by deeply driven stakes.

On the head waters of the Yellow River Dr. Lowdermilk found that the forests held sacred around temples entirely prevented the erosion which was frightfully destructive on neighboring deforested areas where the soil was gashed by gullies 600 feet deep. A large part of China's forests have been destroyed, the better remaining timbered areas being in Manchuria and Tibet. China's forests are about 45 percent conifers. Only about 7 percent of the land area is in forest as compared with 80 percent in Ceylon.

Before the advent of man trees and herbage anchored the soil with their roots. The deeper the soil the better it suited the grass and forest. The moment soil is uncovered vegetation starts replacing the green carpet. Hardy weeds appear within a few weeks. I have seen lava flows supporting a respectable flora of plants within three years after the molten magma was vomited from the earth. But it can't be done overnight. It's time we ceased

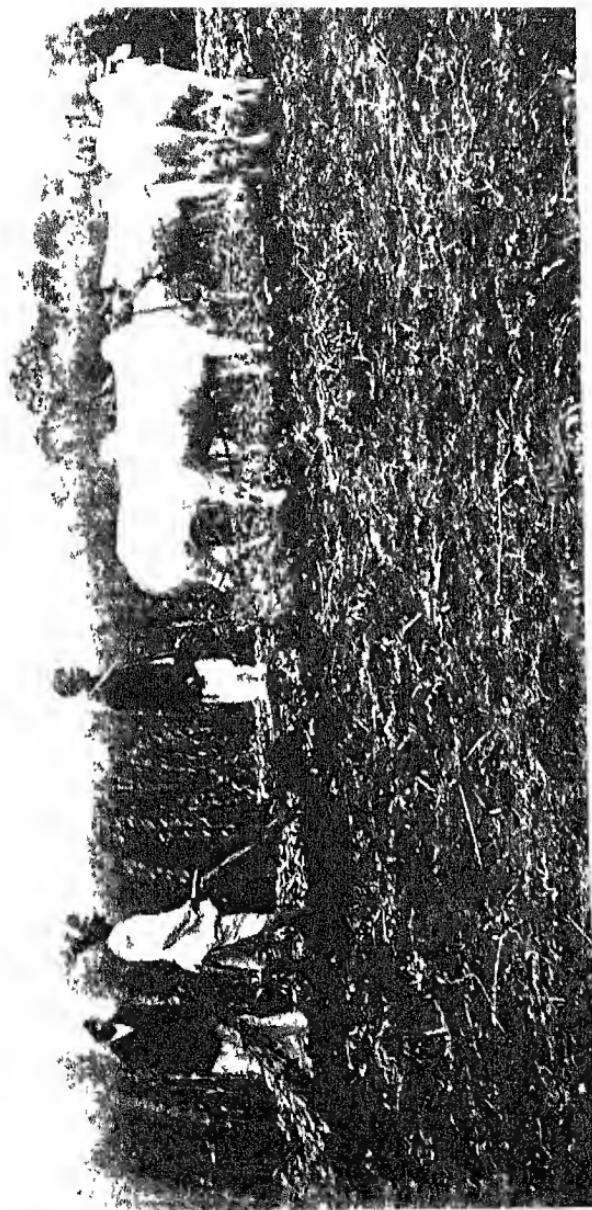
blaming nature for soil erosion. A muddy river is not an act of God. Where the foot of man has not trod rivers are the crystal-clear homes of darting trout and other fish. A murky stream means that some man has uncovered a patch of soil perhaps a hundred miles away and left it uncovered too long, longer than is necessary in a proper system of crop rotation. The importance of soil loss through erosion can't easily be exaggerated. I often recall my impressions of the flowing soil-soup that constitutes such rivers as the Mississippi, Missouri, Colorado, Parana, Nile, Hwang Ho, Yangtse, Indus, Ganges, Brahmaputra and Mekong. The last named, flowing through the entire length of Indo-China must be a nutritious mixture. For the water hyacinth blooms luxuriantly in acre patches that drift lazily along on the surface of the river like floating islands. And this good soil that took nature long years to ripen into a crop-producing state, is merely being carried away to fill up the ocean, clog the entrances to ports and create trouble to shipping.

Both China and India are trying by various methods of irrigation to supplement the water supply in areas of deficient rain fall. The so-called Indian Desert runs from Karachi on the Persian Gulf to Northeastern Punjab near the Himalayas, totaling about 200,000 square miles, with an aver-

age annual rainfall of 13 inches. In this area along the Indus River are the gigantic governmental projects irrigating over 20,000,000 acres and perhaps outshining our western triumphs over aridity. In a total of about 227,000,000 acres of cultivated land in all India over 50,000,000 acres are watered, half of it from pretentious dams and canal systems, both governmental and private.

A unique method of drawing water for irrigation is used at the nearly 13 million wells that water a few acres each. These are shallow wells with a mound built up around the opening, approached by a dirt ramp 50 to 60 feet long. A rope to which is attached a large leatheren bucket and operated through a pulley on a frame-work at the mouth of the well constitutes the irrigation apparatus. The bucket is let down to the water and when filled is drawn up by a span of oxen walking down the ramp. The water is dumped into a wooden sluice to be conveyed to the adjoining thirsty land. The well and all the apparatus are the work of the peasant who tills the land.

For more than two millenniums the Chinese have had extensive irrigation projects. Along the Wei River one of the main tributaries of the Hwang Ho the farmers and the silt have alternately gained the upper hand through the centuries. Canals and dams became clogged with mud and



PLOWING UNDER SUNN HEMP IN INDIA

useless, requiring complete reconstruction. Potatoes and corn were introduced from the United States as crops that would thrive higher up in the foothills than most native Chinese crops. But they left the ground bare to be washed away and deposited where it was not wanted. As usual this erosion was due to suicidal farming and overgrazing. On much of the irrigated land in the semi-arid Province of Shansi the farmers in their battle with erosion during hundreds of years have built great areas of terraced hillsides. At the foot of one sunny slope is an important grape industry. As described by Dr. R. T. Moyer of the Oberlin Memorial school at Taiku these vineyards had to be protected by "dykes along the stream's edge. But, as elsewhere, deposits from the flowing water raised the level of the stream bed after which the dykes were again raised. And so it has come about that water is carried aqueduct-fashion on a stream bed eight to twelve feet above the general level of the farm land."

Since well fertilized land is more retentive of moisture, night soil is carefully preserved and applied. Children and the aged collect animal droppings along the roadsides and add them to their heaps of compost, as may be seen in Egypt today where little tots of children patrol the village streets to collect the dung of donkeys and camels

for use on farms. And in Shansi Province "animal latrines are placed at intervals along the main highways, spots well bedded with straw or Kao-liang stalks where passing animals have learned to stop. But perhaps the climax of Chinese ingenuity is displayed in the mountains where the scarcity of fertilizers is most felt. Here a way has been devised to save the manure of the thousands of sheep that pasture there in summer. The sheep are herded nights on land about to be plowed, the land owner paying an agreed price for that service. At daylight the next morning the land is plowed before the sun's heat has destroyed any of the plant food value of the dung."

Dung and compost may be unsavory subjects for discussion at an afternoon tea. I have stressed their importance for the reason that no better way has been found to maintain the physical, biological and chemical properties in soils required for maximum crop production. No soil could be kept in good tilth for 40 centuries without the use of those materials. On that particular point we have much to learn from the Chinese and all we can teach them is how to use mechanical spreaders if they can afford them. Perhaps the whole matter would acquire a more agreeable and pervasive aroma if we should remind ourselves that violets, strawberry plants and stalks of wheat planted

beside a dung pile develop into more redolent violets, more delicious strawberries and more invigorating staff of life in the every-day miracle of actual transubstantiation that occurs in plant growth.

We may hope that in time the Hindus will break through the religious tabu against the use of certain fertilizing materials of unpleasant odor, and thank Heaven that the commonest bean and potato are able to create or synthesize wholesome and essential food products even from the most unlovely substances.

There are many sun worshipers in the world's population. But the soil is just as worthy to worship. It's the chief heritage of mankind. Made up of mineral elements from disintegrated rocks, permeated with air and moisture, enriched by the remains of uncounted generations of living plants and animals, it reminds us annually of the alternation of life and death. The Eleusinian mysteries were merely the phenomena of inert seeds giving birth to new lives when placed in fertile soils. The soil is the greatest treasure we may pass on to the future of civilization.

VII

HAND LABOR AND FARM MACHINERY

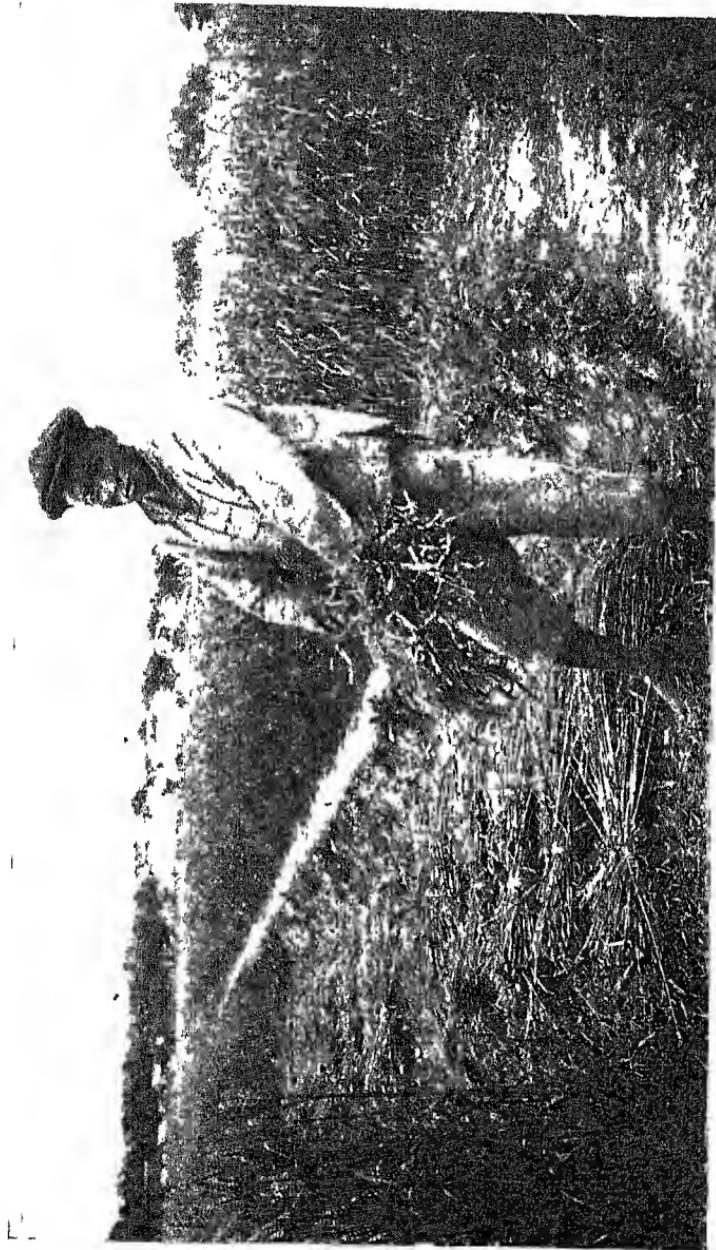
To tell the oriental that human hands came before machines would be about as much news as to say that daylight is due to sunshine. In fact there are whole realms of agriculture and manufacture in India and China where machines not only have not yet arrived but couldn't compete with hand labor in cost, and in many operations not even in speed. I have watched women coaling a ship at Karachi. The skipper assured me they did the job as quickly and more cheaply than by the mechanical endless chain of buckets. A stream of women, wearing the usual anklets of silver, marched by a crew of shovelers who placed a basket of coal on the head of each woman. The human chain moved up a ramp from the coal barge dumping the load into the ship's bunkers and returning for a new load. In Hong Kong I saw a chain gang of men on a rope ladder, hanging over the ship's side, pass buckets of coal from one to another in an endless belt fashion.

Or turn to the Great Wall of China, 1500 miles

long, 20 to 50 feet high, 25 feet thick at base and 12 feet at the top, requiring 20 years to build, and all done by hand. The wall was constructed of tamped earth, a process which produces a stone-like material as enduring as cement or perhaps more so. At any rate in the Shansi Province there are huge mounds and palatial structures of tamped earth in perfect condition after 2000 years of wind and rain, monuments to hand labor.

There is not much encouragement for big farm machinery in India. When some of the fractions of a peasant's holding are only $\frac{1}{25}$ of an acre in size, tractors and combine harvesters are unthinkable. Farm hands will cut hay or grain with a sickle cheaper than a mower. Rice is sown in nursery beds, transplanted by hand after about 20 days, harvested with a sickle, carried by hand to the threshing floor where it is tramped out by oxen and winnowed by tossing up in the air to let the wind blow the chaff away.

Hauling farm products to market is done mostly in oxcarts. A driver, pair of oxen and a cart may be had for about 50 cents a day or rather night. For much of that work is done at night to avoid the heat. Trucks can't compete with oxen on most Indian roads. In one test where a truck replaced 62 ox teams its operation cost more than



HARVESTING WHEAT NEAR SHANGHAI

the ox teams. And what would be left for the owners and ox teams to do for a living?

The Indian insists on the right to sleep when he is sleepy. To start work at 3 o'clock in the morning is no more discomfort to him than to begin at 3 p.m. In either case he may require waking up, not that he is lazy. He works long hours but dislikes to be bound to a fixed schedule. The Hindu doesn't work so well under rigid supervision. The easiest way to get anything done is simply to point out the task and not presume to dictate how it shall be done. The gang of men will probably sit down to talk it over for a couple of hours. But they may be relied upon to do the job in good time, just as their kind in former centuries moved 1000-ton stone blocks from the quarries to the temples of Baalbek and Karnak with levers, ropes, wooden rollers, ramps and human muscles, especially human muscles. On that point a Chinese humorously explained that tamped earth buildings were made of equal parts of clay and elbow grease.

Walls have been built by hand to keep out foreign enemies, around cities, on either side of streets and around each home. As a Chinese friend phrased it "We seem unable to shake off the past. We live within a series of walls. The Great Wall, of 300,000,000 cubic yards of earth, cost the lives

of 30,000,000 laborers. And there is an impenetrable wall of conservatism around each individual. These walls have helped us preserve some of the treasures of the past but they make it a slow and difficult matter to introduce changes."

Someone has said that India is the graveyard of foolish things started. But if the impact of occi-



MEN AND WOMEN LOADING COAL IN INDIA

dental methods of mass production renders some mechanization necessary to prevent the peasant from being crushed, then the ghost of industrialization rises from that graveyard, and the question whether it really is a foolish ghost comes to the fore. Sir Visvervaraya argues that the Indian problem is fundamentally industrial and could be solved by the methods that have proved efficacious in United States, Canada and Russia, and that half

the present rural population would be sufficient to operate the farm land under a mechanized system. On the other hand it has been estimated that any attempt at creating gigantic mechanized farms would entail a colossal exodus from the land involving the urbanization of 150,000,000 ryots. I am quite convinced that Indians and Chinese are or could soon become fully as capable with modern machinery as are Hollanders and Americans. And according to Tso Fan ko modern capital investment in China amounts to only \$2.50 per capita as compared with \$430 in United States. But to bring industrial capital up to our level would require 370 billion dollars, which looms pretty large even in these days of unlimited spending.

Then for a few minutes I would listen to the other side. Since farms in India offer only seasonal and not year-round jobs, it was argued, the industries should come to the villages, not the farmers to the cities. This may be asking the mountain to come to Mohammed but the mountain was there in the first place and may as well come back. The great centralized cotton and sugar industries, formerly located in the villages, have resulted in constant labor disputes and the spread of urban diseases. The basic need, in this view, is concerned with giving the ryot a subsidiary source of

income in a local industry in his own village. "Take the industries from syndicated control and redeliver them to the people. We shall have to fight any movement toward excessive centralization of the industry of the country."

Then the advocate of power farming makes a plea for better plowing. There are 25,000,000 crooked stick plows in India, says he, and not more than 20,000 real plows. The usual Indian plow turns no furrow but merely scratches the surface. The ryot must go over the ground three times with this play-thing of a plow, walking about 50 miles per acre in so doing.

It is not feasible, however, to introduce scientific, mechanized agriculture into India without consolidation of the tiny holdings into farms of decent size. This in turn would render it unnecessary to maintain so many work oxen and would release some pasture land for production of human food, which after all is what every thoughtful person is aiming at in order to raise the ryot above the threat of starvation. For apparently the only promising plan for seeking an adjustment between population and subsistence is to bring the rate of food production up to the rate of population increase. Except on plantations of tea, rubber, cotton, sugar, coffee, etc., Indian farming is peasant



HARVESTING SOY BEANS, MANCHURIA

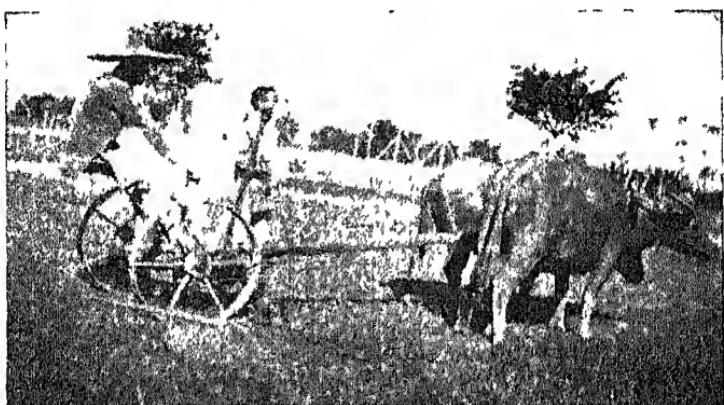
farming, each holding conducted by the operator with his own labor.

It is doubtful if within any easily measured future enough additional productive land capable of cultivation is to be found in India or China to ameliorate the present condition noticeably. In India I was assured that if all fallow were to be tilled it would add not more than two acres to each peasant. In China statistics are notoriously vague and slippery. The Chinese have a popular phrase that means "near enough." Estimates of the area now in cultivation in China vary from 150 to 350 million acres. And on the possible area of fallow land there are nothing but guesses.

No matter in what sidepath or lane we may look for a way out we come back to the solid fact that for the present the peasants of China and India must not only rely on hand labor in operating their farms, very few of which exceed ten acres in size, but must have some local village industry to which they may turn their hands for occupation during the off-season in order to eke out a decent living. For centuries local silk mills served that purpose well over great areas of China. Men, women and children found places in that work. But the centralization of silk mills in a few cities took that opportunity out of reach and brought the farmers face to face with starvation.

Special much-sought qualities of silk had been obtainable from these village mills.

Similarly in India many unique sorts of cotton goods peculiar to certain localities were woven in small village mills and found a vogue throughout the world. But their outlet was closed by the flood



MOWING WITH BUFFALO, CHINA

of cotton goods from the Lancaster mills and centralized plants in India. Big business in India has grown rich by huge government contracts during the war but that has not reached down to the immeasurable poverty of the peasants.

The charka or hand spinning wheel has acquired wide publicity especially in connection with the sincere campaign of Mr. Gandhi for relieving the sad state of the untouchables. It has

been estimated that in the agricultural districts there is enough idle man power to develop with charkas 11,000,000 horse power in hand spinning. For the at least three idle months of the farmer the manpower available for charka spinning is equal to that of the entire output of the Tata hydro-electric power plant. Mr. Gandhi canonizes the virtues of the charka as requiring no capital, no special skill or training, no more strength than that of children and the aged. The charka is independent of monsoon, carries work to every cottage, is not opposed to religion or caste, and helps to solve the problem of unemployment.

But the solution is not quite so simple as that. There should also be hand weaving, gardening, crafts in silver, leather, wood and iron. And this renewal of small home industries naturally suggests that the whole world may perhaps profitably start digging in the economic graveyards of the past for the resurrection of other friendly ghosts. For example certain groups of women in England are already celebrating such a resurrection of a rural industry. In sections where sheep rearing is prevalent, women with the cooperation of the farmers collect the tufts of wool scratched off from sheep in the hedge rows. The wool is washed, carded and spun, and the yarn is colored with vegetable dyes from onion skins, gorse blooms,

elderberries, acorns, walnut husks, dandelion roots, etc. These local, home-made dyestuffs have proved superior to aniline and chemical dyes. The dyed yarns are woven into a large variety of woolen goods.

The income of most villagers in China is not



MARKETING PEANUTS IN CHINA

enough to buy the dietary requirements for efficiency. For them depression hangs upon the relation between village industries and world markets. Successful reorganization of rural areas where farms furnish remunerative labor for not more than eight months a year may depend upon the industrialization of China. The force of international competition can't be overlooked or es-

caped. Local cooperative industries may help and are being tried out in many parts of China.

Until 1937 western China was almost entirely unindustrialized. Since then over 120,000 tons of mining and factory equipment have been transported out of reach of Japanese invaders. New iron ore deposits have been discovered. Chemical, paper and textile industries are flourishing. Local flour mills have been established and more wheat flour is coming into use. Chinese citizens in other countries have remitted \$600,000,000 annually to promote these developments. Highly industrialized nations can no longer hope that India and China will be content to exchange raw materials for manufactured articles. Both these countries are certain to become industrialized. But the peasant can not in fairness be left out of the picture. The process of industrialization must reach into every village and give the farmer part-time employment. No other way has even been suggested for the profitable use of the stupendous idle man power of the peasantry. Urban factories in India fail to meet this crying need. Modern industries have been greatly publicized, but the ratio of rural to urban population has not changed noticeably in the past 60 years. Industry has not absorbed the excess rural population.

Traveling on the broad highways of the United

States we are so accustomed to meeting the huge vans and trucks speeding to their various destinations that we quite forget what man power can do without these motor conveyances. A recent traveler in western China reports that on one main highway in a stretch of 20 miles he met 750 hand carts and 200 oxcarts carrying 650 tons of wheat, and the next day in a distance of 60 miles met 2876 hand carts and 544 oxcarts. Nor should we forget that while women in China were formerly household chattels or pampered ornaments in boudoirs they are now in their new-found freedom quite unrestrained and working side by side with men in all occupations, even as front line soldiers. The familiar pidgin English "no can do" applies to Chinese women no longer.

Commenting on the fact that the old handicrafts and cottage industries which had brought India to the notice and envy of the world have been mostly crushed, Prof. J. C. Kumarappa of the University of Gujarat reports that the All-India Association "is carrying on research on various processes dealing with cotton, wool, silk and other raw materials in the hope that the people may be induced to make their own clothing. The welfare of a community depends on a well-maintained balance of occupation. In every village there should be a small number of artisans who supply the needs of

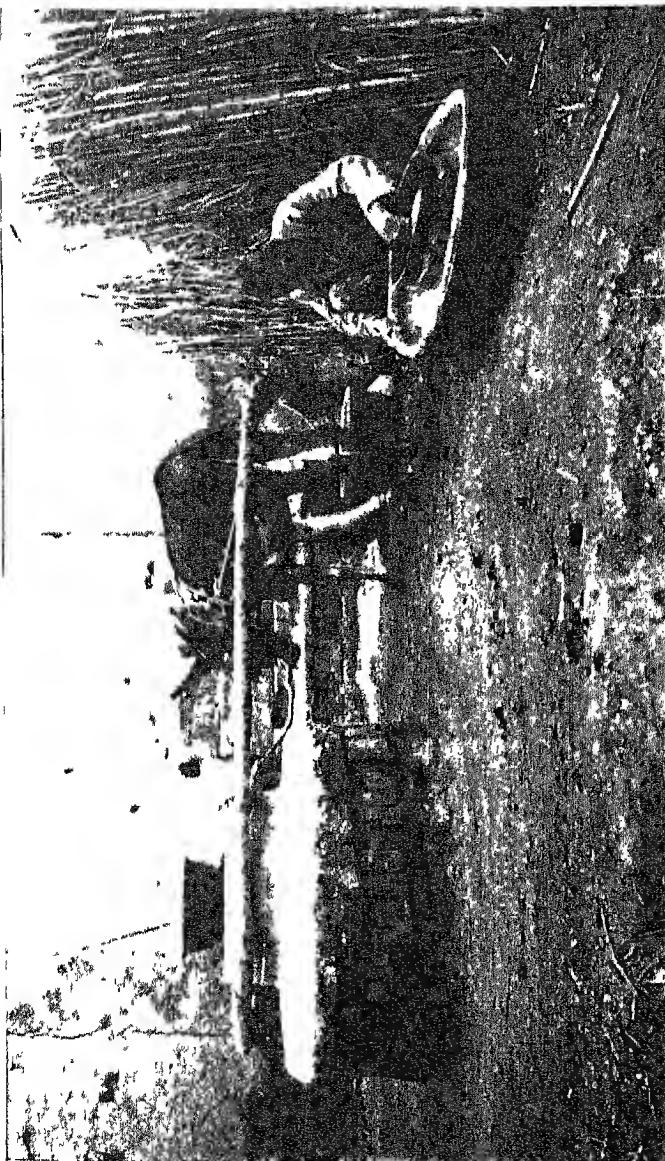


WINNOWING WHEAT IN CHINA

the village." But like so many proposals along this line Prof. Kumarappa's plan leaves out the actual peasant. He is the one that needs occupation that will bring him in a few rupees for his leisure time.

This lack of a subsidiary employment for farmers is of even greater importance than appears on the surface. It's just another aspect of what is so continually referred to as population pressure. In nearly 40 percent of the villages official reports consider population to be excessive in relation to the food supply. In the province of Bihar a medical survey showed that periods of famine or scarcity of food have occurred in one out of every five villages during a ten-year period in which there was no exceptional failure of rain. Under such conditions where the peasant can find no spare-time jobs he becomes discouraged and fatalistic partly as a result of undernourishment, and is often condemned as lazy and shiftless when he is really only half a man by reason of insufficient stoking of the human stomach and engine. Much of India's soil yields only about half what it should. The man power of the peasant could be doubled by doubling the productive power of the soil.

Without in any way wishing to prejudice or criticize the political agitation for independence, which I firmly believe is bound to come, the poli-



GRINDING WHEAT IN CHINA

ticians in my opinion in their enthusiasm have overlooked the urgency of the peasants' lot. Politicians and leaders of Indian thought assured me that when the independence of India is attained her troubles will be over. I listened to an agricultural expert lecturing to a group of zamindars or landlords on methods of "rural uplift" among the peasants. He was sure it could be done "only by educating them and instilling into their minds a sense of responsibility and progressiveness." To a man sitting serenely atop Mt. Everest the situation may look like that. But on a half-empty stomach it seems a pretty thin diet. If the expert will descend down into the valleys of the Indus, Irrawaddy, Ganges and Brahmaputra he will find India's millions struggling with the age-old problems of life and death in poverty, filth, disease, ignorance, superstition and famine. There has been no great uplift in India since the Himalayas thrust their heads through the clouds.

The item of poverty is of course an important factor in the low productive power of the peasant's hand labor. He lacks funds to purchase fertilizers or plows that will do something more than tickle the soil. The peasant is of course not so pigheaded as to resist the adoption of better methods if they are applicable to his conditions, and if he can afford them. "But in the absence of capital and

when the matter is complicated by an uncertain and precarious climate it is natural that the peasant should hesitate to experiment or make any radical change in his age-old system of crude cultivation with primitive implements."

To those who would solve the unemployment problem of the rural areas by transferring a considerable percentage of the peasants to urban industries I would cite the fact that not over 6,000,000 persons are now used in the large-scale industries of India, while perhaps 25,000,000 are engaged in small establishments not requiring machinery or modern power. By inducing more millions to move from farms to cities their condition would not be improved but on the contrary would be rendered desperate indeed. Successful economic migration of the people involving a change in their occupation must come about as a result of actual existing demand for their services in the new location and not merely by governmental pronouncement.

The unfortunate position of Indian agriculture is rendered worse by the Hindu ritualistic prohibition of the use of meat. By that single tabu of ancient traditional origin a tremendous loss of food results and the nutritive effectiveness of the Indian diet is correspondingly lowered. No point is gained however by arguing against vegetarian-

ism. *De gustibus non disputandum.* The Hindu would rather take the loss than violate the tabu.

But the paramount importance of providing profitable employment for the spare time of 700,000,000 farmers in China and India, preferably in



WOOL WHEELED 90 MILES TO MARKET, IN MANCHURIA

work which may be done in the home or in local village shops, deserves the most serious attention of the official and social leaders in these countries. Ordinarily seven men are reckoned as capable of producing one horse power of energy. A hundred million horse power, directed by the brains and

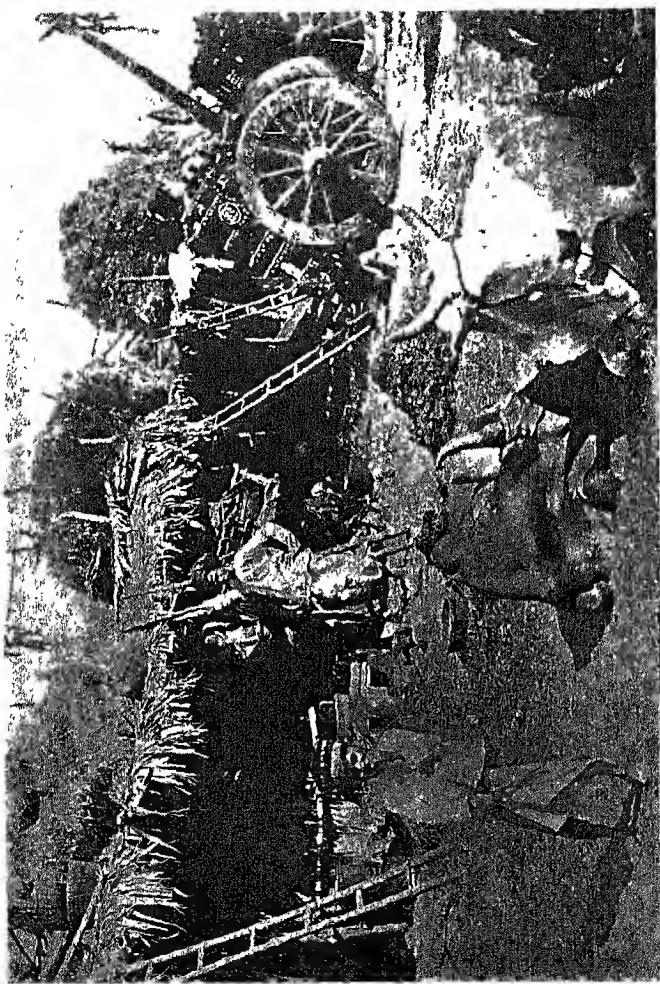
will of 700,000,000 human beings may simply move mountains and accomplish many other seemingly impossible tasks. The ancient world is dotted with the vast temples and pyramids which still stand as everlasting reminders of the power of human brains and brawn.

VIII

THE VILLAGE SYSTEM

The distribution of the population in China and India is so fundamentally different from the prevailing pattern in the United States that a few contrasting figures may be helpful to direct our thoughts toward an understanding of the matter. In China only six percent of the people live in places of more than 50,000 inhabitants. There are 100,000 farm villages of 1000-size and over a million hamlets of the 200-size. In India there are 700,000 villages in which 90 percent of the total population live. By contrast 35 percent of our people live in cities of 50,000 or more, while there are only 10,000 incorporated villages of less than 1,000 inhabitants, and 83 percent of our rural population live on individual farms or in small unincorporated hamlets.

Overlooking for the moment the original social and religious background of the villages in China and India, it soon became urgent, as population increased, to use only a minimum area of land for farm dwellings grouped in villages, leaving all possible fertile land for food production. And there



TYPICAL FARM VILLAGE IN INDIA

was the consideration of greater protection against wild beasts and marauders. Our New England pioneers at first found the village system useful so long as Indian raids might occur. But soon the landscape opened like a beckoning panorama of opportunity, and there was a rush for the 100-acre, 500-acre, 1000-acre farm or a veritable ranch-empire in the cattle country, a situation far beyond the imagination of the oriental peasant.

Turning first to India. From ancient times the small village existed as the characteristic social institution of the country. In fact from whatever slant we approach either India or China the village must be the measuring stick. As Lord Metcalf exclaimed in 1830, "They seem to last where nothing else lasts. Dynasty after dynasty tumbles down. Revolution succeeds revolution. Hindu, Pathan, Mogul, Mahratta, Sikh, English are all masters in turn. But the village communities remain the same."

If we begin in the foothills of the Himalayas with Katharine Ellis who lived a year among them we find "tiny villages on the mountain slopes composed of houses with windows scarcely big enough to put your head out of. You may imagine how much air and light they let into the little dingy rooms, with mud floors and mud walls, and ceilings of poplar poles and willow withes all

shiny black with the smoke of burning dung. It's only the wealthy that burn wood and it's precious little that even they burn. And when they do get a little heat in a room they are careful all winter not to let it out. It helps, too, to have the family and the sheep, goats, yak, the dzo (yak cross with zebu), and the chickens, ponies, and donkeys all living in the same house. If you call unexpectedly you are almost as likely to find the yak in the living room as the master of the house. I don't think you would blame him in the least. Every house we have visited has had dung and straw in the front hall. There is one part of the house you would really like, the roof, a flat mud roof, with parapets of braids of grass. By means of a ramp donkeys, sheep, and goats climb upon the roof, and there the women spin wool for winter clothing."

The organization of Indian villages arose from the association of groups of compound family units. Each family maintained a strict tabu on marriage between too close relatives. The children of one family married into a neighbor family and thus by intermarriage tied together a number of families to form villages of varying sizes. In the provinces of Bihar and Orissa only four percent of the people live in towns and no change in percentages of rural and urban population has

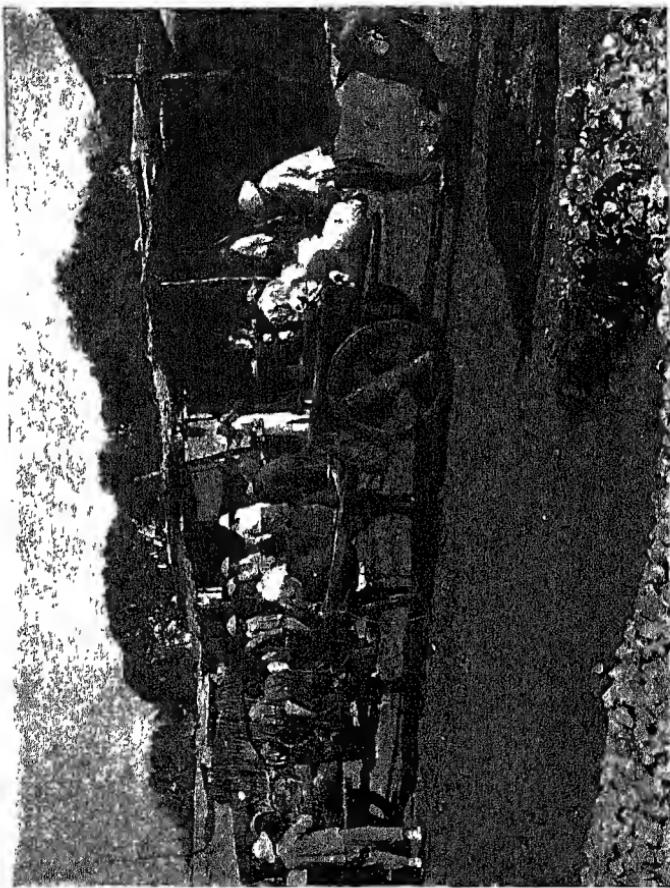
occurred during the past 50 years. There the average size of the villages ranges in different districts from 280 to 680.

Many students of Indian affairs, as Ahmad, Mann, Mukerjee and Ladejinsky, call attention to the fact that in the Occident the shift of population from farms to cities came in the wake of industrialization. In India the reason for the proportionately larger number of people still engaged in agriculture is the lack of notable industrialization and the decay of the previously flourishing village handicrafts. "The small number of industrial enterprises undertaken in the past few decades absorbed only a very small group from indigenous industries and furnished no outlet for the natural increase in farm population."

In the old village system good harvest meant more food to eat and more comforts. But now any surplus depresses the price whereas of old the surplus was stored against a possible lean year. Good harvests bring little prosperity to the ryot because prices fluctuate with the world market. Bad harvests with high prices are of no advantage to him because then he has nothing but his own absolute food requirements. Under the old system world prices had no effect upon him. The self-contained, self-governed, self-sufficient village was economically impregnable.

It may be easier to understand how completely protected such communities were from the impact of outside disturbances, if we look for a moment into the life of a little hamlet in the State of New York, 140 years ago. I have before me the account book of a farmer and merchant of Bainbridge, N. Y. covering the years 1805 to 1844. The utter self-sufficiency of this community is shown by the stability of prices even during the war of 1812. That war created no economic disturbance in Bainbridge. The price of wheat, potatoes, soap, apples, shoes or clothes was not affected. Butter was sold for 12½ cents a pound every month of the year from 1808 to 1839, when it jumped to 15 cents. Tobacco was priced at 20 cents a pound. A home-spun woolen suit with a "good lapelled coat" could be had at any time for \$10. Tea was the only commodity that indulged in war prices. The Bainbridgers drank tea rather than coffee and of course the war made shipments of tea from the Orient pretty precarious. For all other commodities this village was independent, even for starch which was made at home, and for hard cider which almost completely replaced whisky.

Both the Hindus and the Chinese have lived in village communities since the beginning of their history. Indeed the village is the social structure to which these peoples and most foreign historians



LOADING LUGGAGE IN CHINA

attribute the persistence and stability of those civilizations, which with extraordinary pertinacity have survived in full force while many other ancient civilizations in both the old and new world have long since disappeared. Phoenician, Greek, Roman, Mayan, Incan, Aztec and other apparently vigorous cultures rose, flourished and passed away. They were overrun by invaders and conquered. But so were the Chinese and Hindus. The pages of their history are simply blotched with the records of wave after wave of invading hordes bent on murder, rapine and rule. There were three avalanches of Mongols that crashed into India and seized central power. Similar waves of the Genghis Khan ilk ran over China like floods of the Yellow River and took possession of the Central government such as there was. But when these human irruptions had subsided, the Chinese were still occupying their villages, proceeding with the routine of life in the traditional manner. The Chinese had literally absorbed, digested and assimilated their invaders who found themselves merely in the position of titular rulers in Peking. In India today in a population of close to 400,000,000 there are perhaps 90,000,000 to be classed as Mohammedans and large numbers of those are Hindu converts to the moslem faith.

The Hindu villages are based on a combination

of religious, social and economic bonds. The villages were separate little political units in which the needs of the inhabitants were well cared for. Village officers were appointed to look after farming, arts, sanitation, trade, education and protection. Minor functionaries such as the cobbler, barber, potter, goldsmith and even the money lender were also appointed. In times of trouble they could arm themselves. The people might have to flee to other friendly villages. "A generation might pass away but the sons would return and take the place of their fathers on the same homesteads."

But the system of local self government in village units as it exists today in British India is an exotic institution of comparatively recent origin. In lieu of the ancient panchayat or board of five appointed by virtue of caste or heredity and remunerated by fixed fees, governmental functions are now divided into two classes:—the "reserved" subjects of a general political or military nature which may be acted upon only by the provincial governor with the aid of two members of the Executive Council, and the "transferred" departments such as education, cooperative societies, sanitation, farming and roads also under control of the governor but with some local participation.

But the inherited habits and racial memories

of the old system, in which all individual and civic affairs were local functions, are so persistent and all-permeating that friction is quite unavoidable. The intricacies of local self-government have been well described by Patrick Geddes of the Madras University. "Town planning is not mere place planning, nor even work planning. To be successful it must be folk planning. We must not coerce people to move against their wishes and interests, but must find the right places for each sort of people with the same care with which we transplant flowers."

A certain amount of friction between villages and large cities has always existed and must be looked upon as a normal condition. Now and then it results in more or less serious uprisings. Cromwell's temporary triumph in England was the triumph of the small towns and townspeople over the cities. The several uprisings in India against the British have stemmed from the same cause. The villagers feel that public improvements are too often undertaken with the welfare of the cities in mind rather than of the villages. Thus it is complained that even the railways were constructed for the convenience of administrative co-ordination and for political strategy rather than for economic efficiency. It has sometimes been contended that had canals and feeder railways

been developed in the early days India might now be a land of large scale farming and much greater industrialization. Burke, meditating on what seemed to him the sad neglect of the Hindu villages, exclaimed "there is nothing before the eyes of the natives but an endless prospect of new flights of birds of prey and passage, with appetites continually renewing for food that is continually wasting."

Every detail of individual and communal life in Hindu villages had become so fixed by the habit of centuries that any change enforced from outside resulted in chaos and irritation. As argued by Ramaswamy, "Economic relations cannot be separated from social, political and religious relationships all of which give a regional civilization its personality." The mere fact that British control of the central government was destined willy nilly to affect village affairs gave the natives a made-to-order scape-goat upon which to hang their complaints. Present social arrangements in India may not be ideal or even good, but because of the prevailing illiteracy of the villagers and their inability to agree on what they really want a modicum of precaution is suggested before making any radical changes. Enormous friction may easily be generated by trying to introduce institutions which do not fit into the traditional habits of the region.

The British government has been severely criticized for pursuing the policy of bestowing a parliamentary system on a combination of ancient democratic forms with caste, Kismet, Karma, fatalism and mediaeval autocracy.

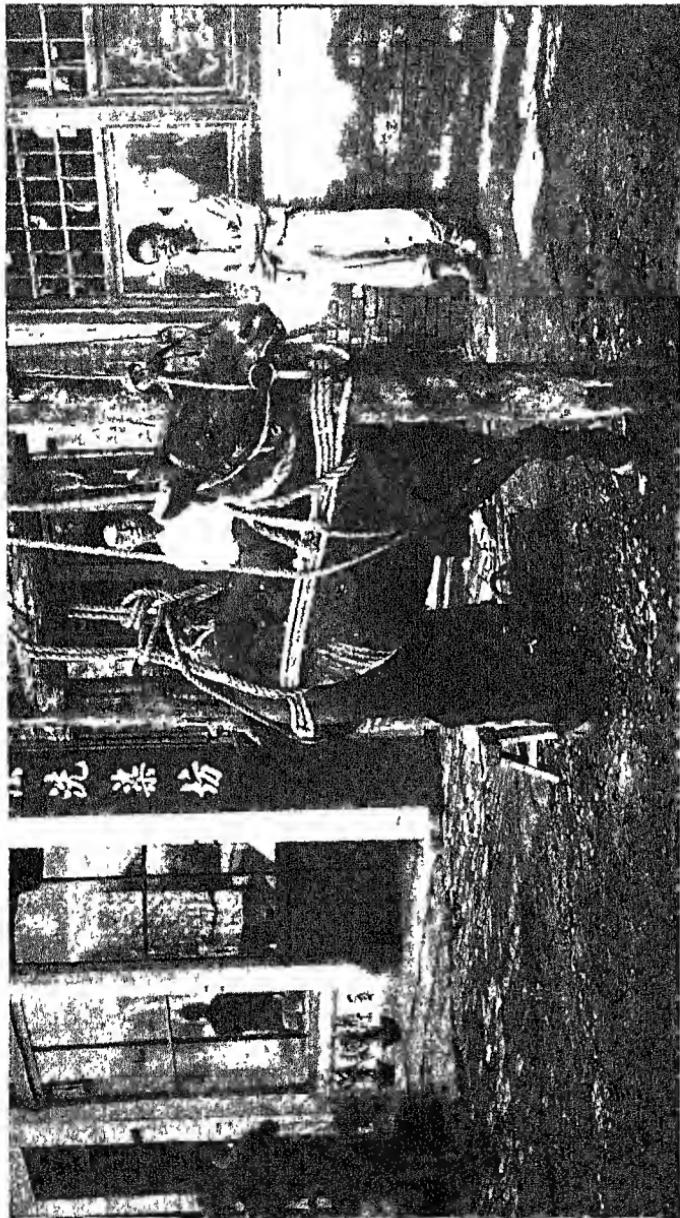
The best policy for an oriental people may well be to remain oriental. Offhand there seems no more reason to expect beneficial results from westernizing India and China than from orientalizing the United States. Only about 10 percent of the Hindus have sought adjustment to recent world changes. If the 700,000 villages of India and the million hamlets of China were suddenly exposed to the direct effect of price fluctuations in world markets it might precipitate them into an indescribable anarchy while trying to follow the incessant shifts of fickle prices.

One of the effects of better transportation in rural areas has been to induce many peasants to venture into cash crops for sale with variable and often unpleasant consequences. The Royal Commission on Agriculture somewhat exaggerated the benefits from railways and decked out with pretty feathers a rather plain "ugly duckling." To be sure railways have brought many luxuries to the peasant from foreign countries and other articles which he formerly produced himself, thus making it difficult for him to balance his budget. Some

observers have put the blame for this situation upon the peasant who has been accused of being obstinate and of hugging his poverty with resignation in order to maintain his "standard of wretchedness."

But a large part of the difficulties experienced by the Hindu villagers is due to ignorance and poverty. As has frequently been stated by Indians, Moslems and British officials alike, the meager and inelastic nature of local revenues rigidly limits expenditures even for such an obvious need as better sanitation. Then too an indifference toward all forms of public life sits like an incubus upon the villagers. Moreover the peasants in recent decades have had no responsibility in public affairs, in fact have had little opportunity to exercise any responsibility in self-government. But in spite of all these obstacles, as Mallik, Mukerjee and Ahmad have pointed out, the peasants are taking heart, learning how to adjust themselves to the realities of their environment and, best of all, are making encouraging progress in surmounting or smoothing away the sharp angles of religious and caste dissensions.

Likewise in China while theoretically considered a noble profession, agriculture and the million rural villages were pretty sadly neglected by the central government authorities. One day



VILLAGE BLACKSMITH IN CHINA

while I was in Shanghai the Ceremonial Rites department of the Ministry of the Interior issued a proclamation on the formalities to be observed at weddings and funerals. Twelve chapters of the decree were taken up with a detailed description on how to get properly married, and eighteen chapters were devoted to the method of conducting funerals.

The following day a good roads program was announced. Heading the list of projects was the then wholly fantastic vision of a wide surfaced highway from Shanghai through Nanking, Hankow and Tibet to join an arterial highway in India. But what of the farmer all this time? Had he petitioned the government for aid? No. That would in his experience be an unwise step. Whenever in the past the government had turned its attention to agriculture, it was for revenue only. For generations on end to the oriental the government was an institution designed to squeeze money out of the people for the use of government officials.

The unity of China stems from the sanctity of the family, the immemorial social institution at the basis of the rural village. As graphically expressed by Emile Hovlaque:—"The basis of this fundamental unity is the family system which has dominated Chinese society and permeated every

aspect of life. It finds expression in an ancestor worship, the oldest form of religious feeling. It is the cornerstone of Confucian teaching, accepted by 70 generations of Chinese, giving first place to filial piety and discouraging children from going far away from aging parents. The association of families in a community provided a system of local government, enabling village life to maintain an effective organization even during periods of political anarchy. The wisest and most experienced heads of families constituted the governing board of the village. The meeting place was the village temple. China, therefore, is a democracy composed of millions of family corporations."

Since the days of Confucius the family has been a veritable cult with appropriate ceremonies at marriage, death, family reunions and at the shrine of the household ancestor. China's social stability has been largely due to the family unit. No alien invasion has disrupted this cult and no other social system seems to have equal permanence in the presence of any and all outside changes. But at present industrialization tends to break down the family system since women are flocking to cities as factory workers.

I have already reported certain figures for the rural and urban population of China. But of course they are all estimates. There has never

been a census in China as we understand the word. So many Chinese and foreign agencies were engaged in the relief of the great famine of 1928 to 1930 that it seemed reasonable to expect some reliable data on the village populations, but the estimates of deaths varied from two to fifteen million. The Chinese are quite unable to understand our passion for statistical accuracy. They insisted that the fifty million, more or less, who were still without enough to eat constituted a more urgent problem than the determination of the exact number that had already died of starvation.

But fortunately we have many eye-witness accounts of what is taking place today in the villages of certain regions. Thus Dr. R. T. Moyer describing the situation in the province of Shansi says "The course of the war has already seen innumerable villages burned, farm animals destroyed and personal possessions lost. Of the future one thing is certain. The life and farm practices of the rural inhabitants of this region will from now on rapidly change. Social movements, economic developments, political changes and scientific contributions to agriculture will all have a part in this alteration. Not for very much longer will the agriculture of Shansi remain in the unique traditional form into which it had been fashioned by many centuries of a nearly indigenous develop-

ment. 'The native intelligence of these farmers is evident from the fact that under conditions no more favorable than those in Kansas, Nebraska, Colorado and Wyoming there has been maintained in Shansi, largely by agriculture, a population $14\frac{1}{2}$ times as dense as that of those states. And in spite of forty centuries of cultivation the soils remain fertile."

Apparently the Chinese villagers are coming to the conclusion that they have suffered largely because of their non-militancy. China has been ruled by civilians recruited not by heredity or popular suffrage but by examination for talent, their wisest and choicest citizens. For centuries they have practiced pacifism with a passion for freedom, for being let alone. They have been a peace-loving folk. Never has a Chinese poem glorified war. Pacifism abroad and freedom at home has been the Chinese policy for 40 centuries. Even under the empire the burden of federal officialdom was made as light as possible. Usually not above 2,000 persons were in federal employ in this nation of 400,000,000 population.

In a village of 1500 people a short distance west of Shanghai with the aid of a Chinese student I plied the inhabitants with questions to which they replied with their usual smiles, courtesy and keen appreciation of humor. The local shoemaker told

me that by reason of my feet being larger than usual with Chinese he would have to charge me an extra dollar for a pair of hand-made shoes. And the Chinese dollar cost me only 37 cents in American money! There was a temple on the outskirts of the village but religious observances were carried on mostly in the homes. Over 80 percent of the families were engaged in agriculture, about 6 months work yearly on rice besides that required for wheat, cotton and vegetables. Local travel was mostly by boat or wheelbarrow. The usual list of artizans required in the life of a community were of course plying their trades mostly in the service of the village, but a few exceptionally skilful ones marketed some of their wares in Shanghai.

Thus these small villages that since the dawn of recorded history have been the very bones, sinews, blood and muscles of the Chinese and Hindu civilizations will of necessity and by virtue of their vigor and stability continue to serve their vital functions in the future of these two great oriental races. Changes will occur in the habits of the villagers but these changes will hardly be radical or startling. Racial composition and tradition cannot be transformed over night. The ingrained conservatism of 40 centuries will not run amuck, come Wednesday next week, no matter how great

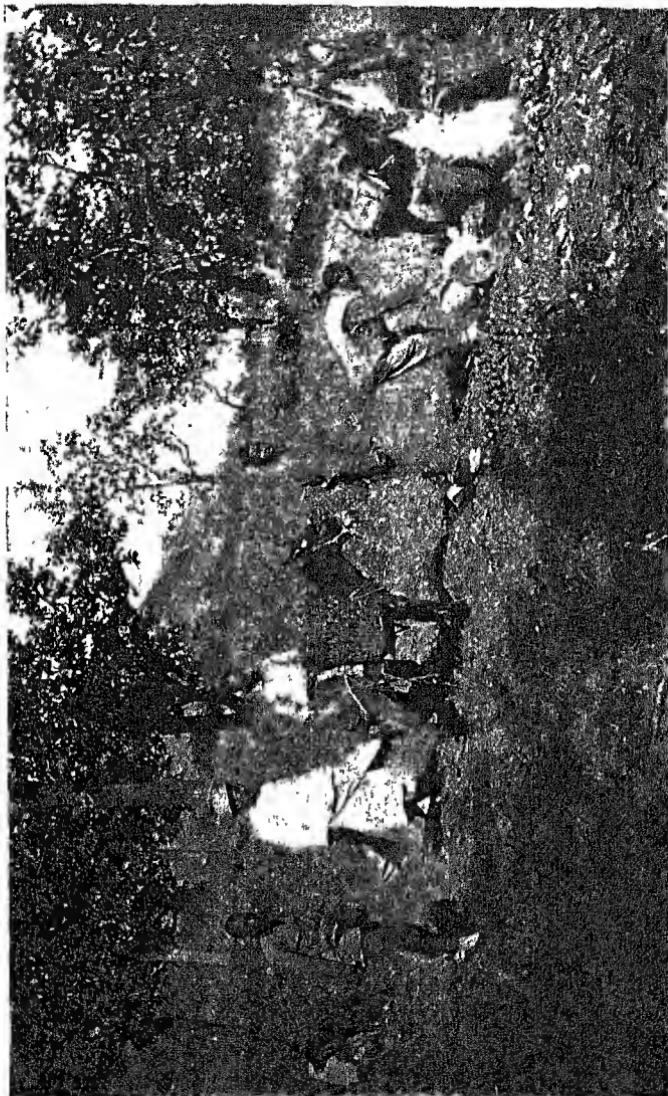
a confusion may prevail in opinions on how to restrain aggressor nations in the future. In 1945 as in 1845 and 2045 B.C. the task of these farmers will be to produce food for hungry mouths and that task requires brains, brawn and orderliness

IX

FOOD AND PLANTATION CROPS

Only in populations of such great density as is the case in parts of the orient has it been found necessary to ration the arable land between crops grown for human food and commercial crops, such as rubber, cotton, sugar, tea and coffee, that lend themselves to a large plantation system. European nations soon discovered that there are fat dividends tucked away in plantations of large size, where an unlimited supply of cheap labor is to be had. But a practical limit of expansion is reached as soon as the commercial crops encroach on land necessary to produce food for the natives. The Dutch recognized this fact in Java long ago, where they established a special land tenure system. The land is all owned by the natives and certain areas may be leased by sugar companies for growing a single crop of cane, requiring twelve to fourteen months. By law the land must then be returned to the natives for two years. Between sugar crops the land is planted to rice, corn, tapioca or other food crops.

It had been found necessary to adopt this plan



MARKETING PERSIMMONS IN CHINA

to protect the natives against the temptation to lease too much of their land to the planters who might offer an attractive rental. But when food production fell below local needs, prices rose to a point where the rental cash was inadequate to buy their actual dietary necessities. Likewise in the Philippines 60 percent of the cultivated area is in food crops, rice alone occupying 38 percent of the arable land, while sugar cane, coconuts and tobacco cover only 35 percent of the possible farm land. But a recent survey indicates that at least 67 percent of the total crop area should be devoted to raising food.

It is impossible to draw sharp lines between food and plantation crops. Sugar is a food and so are coconuts. But no combination of sugar, tea, coffee, cotton, jute, sisal, tapioca, rubber, kapok and linseed would constitute an adequate diet. Nor is there any necessity from the nature of those crops that they should be cultivated in large continuous areas. Cotton, sugar cane, rubber, tung oil, Manila hemp and cinchona are all perfectly adapted to a small farm system. Mills for handling the products may be conveniently located in centers of production. Nor, again, is there anything about food crops requiring them to be cultivated in small patches. Rice, potatoes, wheat, corn, grapes, oranges, millets and beans may be

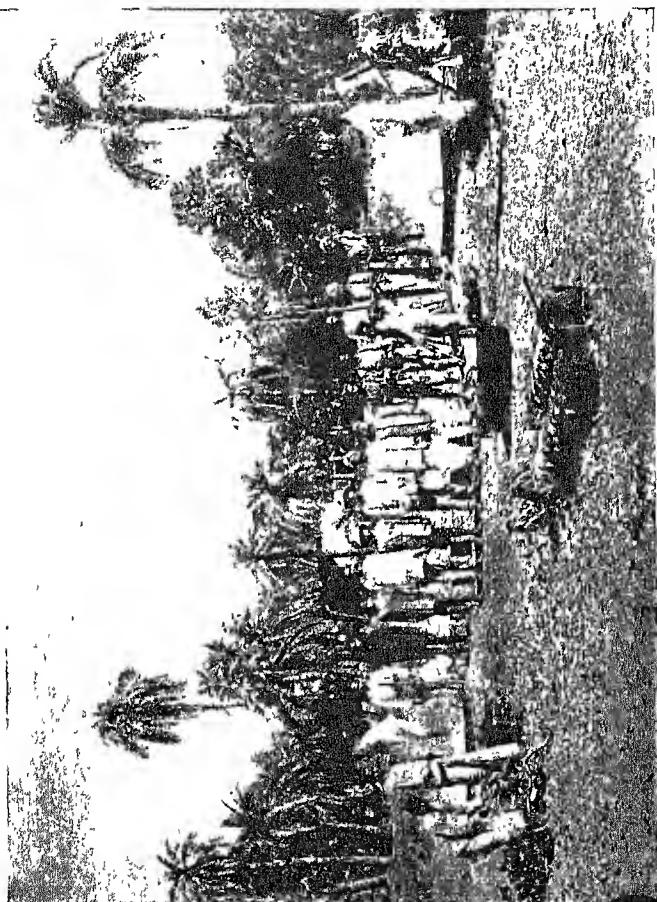
grown equally well in acre lots or in sizeable plantations.

But there are important distinctions that may not be overlooked with impunity where millions of hungry mouths are clamoring for food. Normally most food crops are of a bulky nature and of comparatively low unit price and should preferably be grown near the consuming population.

In years of poor crops accompanied by famine and starvation the urgency of the food problem is evident and fully acknowledged by all public officials in India. But in good years optimism prevails, all eyes are turned toward world markets and half of India's exports may consist of rice, wheat, oil seeds, jute, hides and raw cotton. In early days the villagers grew practically nothing but food for home use. But in Bengal the jute millers dangled the siren attraction of rupees for jute before the eyes of the ryots and they responded to their own loss and sorrow. The production of rice, the staple food of the people in Bengal, is already 70 pounds per capital less than 35 years ago. India's industrialists have their eyes on world trade in manufactured goods but the distribution of the benefits of foreign trade is very irregular and the peasantry seemingly get little good of it. To 90 percent of the population an adequate and unfailing supply of rice, wheat, food sorghums, millets and other

grains as well as vegetables, oil crops, fruit and milk are of far greater importance than an exportable surplus of cotton, lac, jute and tobacco.

While only 29 percent of the total area of India is actually in crops, the suggestion of bringing more land into cultivation made but small impression on the members of the Royal Commission in their long study of this problem. Their report is pretty pessimistic. "Throughout our investigation we have been constantly impressed with the thought that mere material improvement alone will not bring lasting benefit to the agricultural population. Increase in yield by better seed and better cultivation, security of harvests by the expansion of irrigation, control of losses from pests and diseases, higher prices from improved marketing—all these will merely postpone the effects of the growing pressure of population on the soil. No lasting improvement in the standard of living of the great mass of the people can possibly be attained if every enhancement in the purchasing power of the cultivator is to be followed by a proportionate increase in the population. What India needs is not only that there be no increase in her numbers but that her population should go on declining for some years to come. This alone coupled with a rapid industrial activity may restore the balance between food and population



MAKING SYRUP FROM PALM JUICE, INDIA

and thus perhaps solve the problem after a long period."

The precarious rainfall is also a factor in this puzzling situation. The dates of the rainy season are regular enough, but the amount of rain is unevenly distributed, ranging from 3 to over 100 inches in various parts of the country, and not wholly reliable every year in any region. At least one-fifth of the crop area is under irrigation but as Ladejinsky argues, that leaves four-fifths of the cultivated land subject to the abrupt transition from dry to wet season, and the frequent failure of the monsoon rains to provide sufficient precipitation.

Even if the illiteracy, the sanitary service and the iniquitous system of land tenure with which the peasant must contend were largely ameliorated, the small size of the individual holdings would make the outlook blue indeed. As population increased the area of crop land expanded somewhat but not as fast as the growth of population. Increased yields per acre might have come near to an equilibrium temporarily. But yields did not improve, and the unchecked increase in population keeps perpetually unbalanced the ratio between food supply and hunger. Automatically the more peasants the smaller the individual holdings become. Wherever I inquired the answer

was that the minimum holding for the subsistence of a family is five acres. But even in Punjab one-fifth of the farmers cultivate only one acre or less. "In the pre-British days," I was informed, "and the early days of the British rule the holdings were mostly of a fair size, frequently more than 10 acres, and 2-acre holdings were hardly known. Since then the number of holdings have more than doubled and 81 percent of these are under 10 acres in size and 60 percent are less than 5 acres." Bear in mind also that these 5-acre farms may be split up into a dozen or more scattered fragments, and the wonder is that India can feed herself at all, shackled by the tyranny of this hereditary fragmentation of the crop land.

Recent developments in peanut production present us with an example of the rather rapid changes that may take place in Indian agriculture. In 1912 peanuts occupied only 1,300,000 acres. There are now nearly 9 million acres with a production of about 4 million tons, and the acreage is still increasing. But peanuts are utilized chiefly for the production of a salad oil as a substitute for olive oil, or in the manufacture of soap and margarine and only in a small way directly as human food.

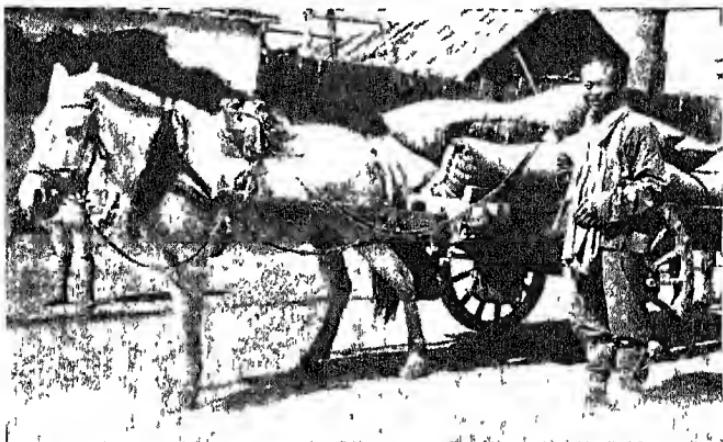
Notwithstanding their high nutritive value, as publicized in our South by the lifetime of research

by Dr. George Carver, India exports from 400,000 to 700,000 tons of her peanuts annually. China may more safely risk exporting the surplus of her peanut crop because she has the even more efficient food product, soybean, upon which to rely.

A comparison of the import and export statistics of any country may seem on their face value to result in utter nonsense. The reasons for India's exporting some of her rice when the deficit of rice in that country is usually 1,300,000 tons are not apparent on the surface. It may be due to fluctuations in world prices, transportation facilities or any one of a dozen other causes. In a restaurant in Nogales, Arizona, at a time when fresh peas in carloads were rolling through that border town to United States markets from the west coast of Mexico, I asked about the source of the canned peas that were served to me. They came from Italy, partly because the restaurateur was an Italian. During the 1916 famine in northern China wheat flour could be shipped from Seattle and delivered in Shansi in less time and at a lower price than from Szechwan.

Moreover the Hindu farmer must always adapt his operations as well as may be to the vagaries of the monsoon climate, which are quite unpredictable. If the rainfall is inadequate, some crops will be a total failure, and it may be too late to replant

or try a catch crop or useless by reason of the continuance of the drouth. Lack of rain during the only season of the year when rain may be expected leaves the ryot foodless, jobless and hopeless. There is scarcely a year when crop failures do not occur



HAULING SOYBEANS IN CHINA

in some part of India and quite extensive drouths occur with considerable regularity at the familiar 11-year sunspot intervals.

In China the situation is not quite so distressing. In the first place Chinese farmers are blessed with a somewhat more favorable climate for plant growth, with rainfall more evenly distributed. Floods and river inundations are more to be feared than drouths. Moreover the Chinese farmer had

developed the production of food into a more precise art than had any other race. By long experience of these hardy people during 40 centuries all that could be learned by actual practice had been formulated and crystalized into a system that had been handed down from father to son along with his paternal blessings and precepts for the guidance of his life activities.

Guarding the fertility of the soil more closely, if possible, than his cash savings, the Chinese had followed a crop rotation with legumes which enabled him to secure two, three or sometimes four crops yearly from the same plot of land, the crops being carefully chosen for their adaptation to the season of the year and to the time required for reaching maturity. In fact he had learned how to raise three different crops in conjunction on the same land in various stages of growth. Since he treated the soil the best he knew how, he expected it to give a good account of itself. Other races have learned how to do likewise, though perhaps with less precise adjustment. In Rhodesia I frequently observed native plantings of what might be called a crop goulash composed of pineapples, corn, sweet potatoes and bananas.

Attention has frequently been directed to the fact that the export of food crops from India may be relatively larger than her imports of food.

Among her exports are fish, fruits, vegetables, spices and peanuts. The peasants are apparently forced into this practice to meet their cash obligations to the government and the landlords. A significant feature of India's food imports is the fact that they serve the needs of the urban population and contribute little or nothing to the diet of the villagers.

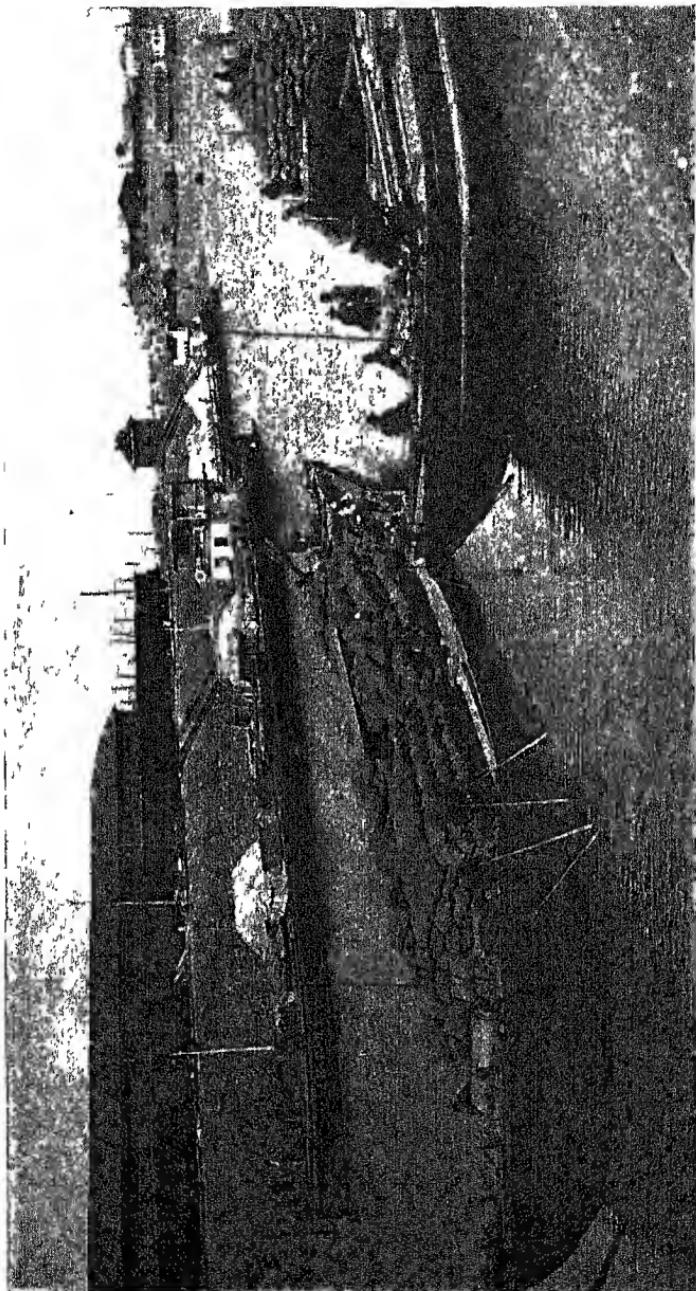
While rice from time immemorial has been the principal cereal food of oriental peoples, wheat is coming into more prominence in both India and China. India has been exporting wheat since 1870 at first from Calcutta, then from Bombay and lately from Karachi. At present production is about 10 million tons, with a flour output of around 600,000 tons. Local consumption of wheat is increasing and with reduction in rice imports it is likely that the entire wheat crop will be needed for home consumption.

Fruits and vegetables come to mind at once in any study of the areas properly to be allotted to food crops as contrasted with plantation developments. In India about 1,800,000 acres are devoted to fruits, 60 percent to mangoes, 20 percent to bananas and the rest to citrus, grapes, pineapples, guavas and various tropical fruits. The mango is a favorite fruit with the Hindus, but where the supply of vital food is so limited as in India it

would seem that the mango is overstressed. It has about the same nutritive value as the peach and being in season only a few months a year, there is usually a glut of the market accompanied with considerable loss. In much of India the inadequate diet of the ryot is not from lack in quantity but from lack of the variety which can only be supplied by growing a wider list of vegetables and fruits.

The war has stirred Chinese life in all its phases and to the very dregs in the bottom of the cup. Substantial increases are taking place in the planted acreages of wheat, rape, corn, sweet potatoes, sesame, peanuts, oats, barley, peas and broad beans as well as in cotton, tung trees and other commercial crops. Everywhere the government is urging measures for increased food production. For centuries the Chinese have lived mainly on their front porch, the Pacific seaboard. The Japanese invasion forced them to move into the other parts of the house, running all the way back to Tibet. They have found a goodly heritage, previously only half occupied.

Plans to increase food production by 6 million tons a year include better plowing, seed selections, control of insect pests and diseases, soil conservation and, where necessary, chemical fertilizers. Irrigation projects extensive enough to increase



BARGE LOADS OF SOYBEANS, MANCHURIA

cereal production by 2 million tons are in construction. By scientific breeding the yield of rice has been raised 30 percent, that of wheat 35 percent. Experiment stations for improving the breeds of cattle, pigs, sheep and horses have been set up, and nine stations for wool improvement. Widely distributed laboratories have been constructed for the preparation of serums and vaccines to control diseases of animals. And large areas of land are being reclaimed for crop production and for reforestation to prevent river floods.

Apparently nothing but a catastrophe can shake a nation out of a Rip Van Winkle sleep of traditional inertia. The Chinese farmers are thoroughly awake. The impetus of modern scientific research added to the native industry and inherited wisdom is almost certain to carry them into the front ranks of agricultural efficiency. All these centuries they have made their way without benefit of scientific assistance.

Likewise the Hindu peasant until very recently has had no real help from the cities or central government or from the rajas and money-lenders of his own race. He has fought his way alone against the none too gracious climate of India in poverty, ignorance, lack of sanitation and under the handicap of social and religious restrictions that clash with the more realistic methods and conceptions

of the work-a-day world. But he is slowly adjusting himself to the impact of this economic system. He is learning how to cooperate with other castes and religious beliefs in modernizing the business and sanitary conditions of his village. The desperate plight into which the villagers had fallen from their inability to understand or overcome the evil effects of foreign markets has at last been recognized by both Hindu and British leaders. No longer will the agricultural interest of the government be limited to the appointment of commissions and the publication of voluminous reports. Remedial action and help are in sight. Such a fearful and unnecessary famine as occurred in Bengal in 1943 may not be permitted to recur.

Thus part of the lesson that war has taught may be salutary. We are born as wasteful as tigers. But we are obliged to be thrifty and also wise or starve. They that die by famine die by inches exclaimed the Psalmist. If famines are allowed to recur as of old the world should blush for shame that native wit plus modern science could so utterly fail us. It should not be too difficult a task to determine with reasonable accuracy the right proportions of land in India and China to be devoted to the production of things to eat and of things to sell. In so doing we may also allow nature to recarpet with grass some of the mistakes of our

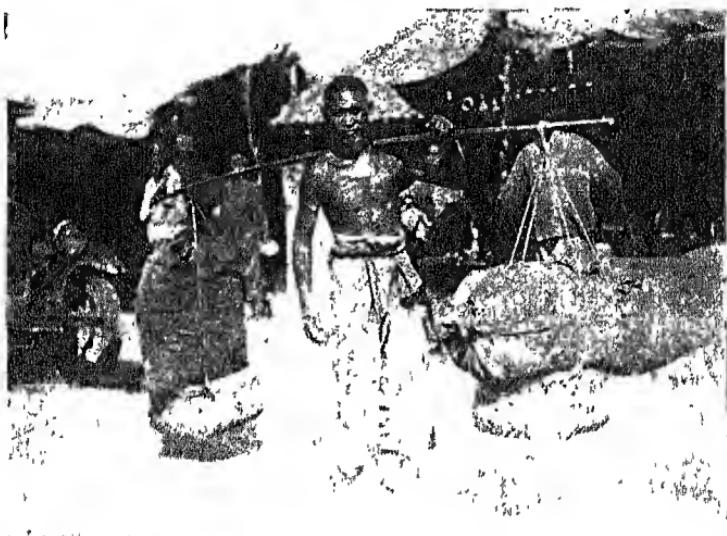
farm policies. "Grass," said J. J. Ingalls, "is the forgiveness of nature, her constant benediction. Forests decay, harvests perish, flowers vanish but grass is immortal."

Too much stress can hardly be laid on the kind and quality of food as contrasted with mere quantity. Peasant children in China are better proportioned and more rugged in appearance than the village youngsters in India. Too often these latter are skeleton-thin of legs and arms, with ribs easily countable, and especially pot-bellied from distention and flabbiness of the stomach and abdominal wall. This condition is the result of a diet of too much rice and too little green vegetable and milk intake. Prof. B. C. Roy of Calcutta University has made a study of this phase of Indian nutrition. It seems that the Hindu suffers so much from malnutrition that he readily becomes a victim of disease. His food is usually deficient in mineral salts and vitamins. Poverty and ignorance, the twin nemesis of the Indian ryot, lie at the basis of his inadequate diet. In British India there are about 10 million infants on mothers' milk. But this milk is poor in quality because no attention is given to the diet of pregnant women. "The total amount of milk from cattle and buffaloes in India is about 20 million tons. If all this were available as fluid milk not only would the

children get more but adults also would have a share. But unfortunately, owing to difficulties of speedy assembling, long distance transport and of large-scale processing of fluid milk, its consumption is confined to the areas where it is produced. Only 25 percent of the fluid milk is so consumed, or only 5 million tons, or about half the minimum requirement for the children between 5 and 10 years of age."

As I traveled through India to my constantly reiterated question why is nothing done to remedy an admittedly bad situation the reply was almost always an echo of defeatism. The peasants are too poor, too illiterate to make use of published information, too much weighed down by the dead hand of the past, too rigidly shackled by social and religious traditions and too heavily burdened with taxes and usurious interest rates, sometimes compounded up to 50 percent. As D. R. Gadgil expressed it, "The difficulties in the way of increasing food production are twofold. First, research must tackle the specific problems of the small cultivator. Second, the results of research must be brought to his door. Thus far research projects have not been so planned and in bringing the results to the attention of the ryot Indian official organizations have been notoriously weak. The main need of Indian rural economy is to increase the

resources of the small peasant by organizing local communal effort. Only a democratic form of government can adequately supply this need. The time may not be far distant when the peasant in



CARRYING PEANUTS IN CHINA

possession of a medium of political power may use it in forcing a realization of his needs on the powers that be."

Possibly political action is the answer to the problem. At any rate some sort of organization or cooperative grouping seems necessary. In the face of the many long-standing and thus-far insoluble

difficulties the lone unaided peasant is helpless. All members of each community must join hands to remove the blockade in the path of progress. The individual Hindu is not wanting in native wit. On a proper diet he is a capable worker. With proper cultivation the soils of India will produce far more food than at present. It seems a pity that the man power and natural resources of the nation should be prevented from operating at full capacity.

The possibilities in combined effort are evident in the progress made in the production of sugar. Sugar cane is thought to have originated in northern India where today about 30 percent of the world's sugar acreage is found, the Indian crop covering 4 million acres more or less. Although that is only 2 percent of the total farm area it is an important cash crop, nearly 6 million tons of gur and refined sugar. Nearly all of it is for domestic consumption, and India is thus largely independent of international trade conditions. About 60 percent of the cane is used for making gur, a raw sugar prepared by evaporating the cane juice in open pans. Most of the Indian cane crop is converted into gur on the farms of the individual peasant growers, bullock power being used for crushing the cane. Gur is therefore an outstanding local industry. India has become practically

self sufficient in the matter of sugar, both raw and refined. In 1943 no refined sugar was either imported or exported. India must, however, be considered a potential exporter of refined sugar.

Tea is almost exclusively a plantation crop. There are nearly 900,000 acres of tea in India with a production of 570,000,000 pounds. Tea replaced coffee in Indian agriculture after the Hemileia disease had rendered coffee planting too precarious. It's a joy to visit the tea plantations of India. They are controlled by men who know the market demands and the business is adjusted to the requirements of world commerce. I don't wonder that the plantations are called tea gardens. Tea gardens they surely are. Each tea bush on the thousands of acres through which I climbed in the Darjeeling district looks as if it had the whole attention of an expert gardener. The laborers on the estates are hereditary, generation after generation of the same families literally living in the tea gardens from the cradle to the grave. About 80 percent of the crop is exported.

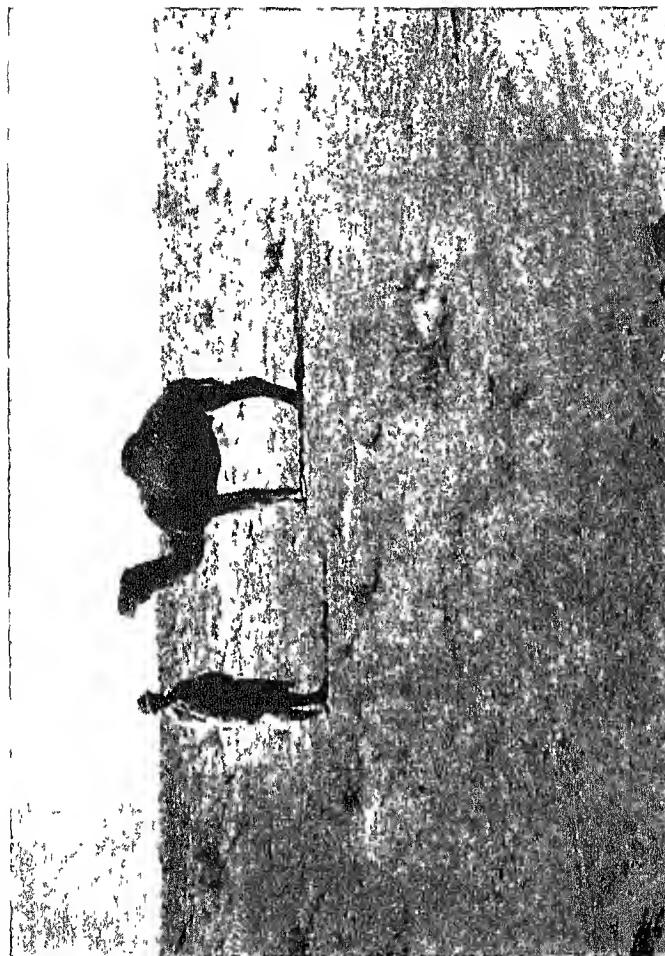
By contrast the Chinese are a race of tea topers. By the hard way of experience they learned that in a densely peopled region in times of cholera epidemics water from the usual sources is not safe to drink unless boiled, and when boiled the flavor is flat. Tea was the obvious way out of the dilemma,

very mild tea or you might call it tea-flavored water. The leaves are left in hot water only a minute or two. A great variety of grades and prices of tea is presented for choice in China, some brands with flower petals of various kinds added, particularly jasmine or gardenia petals, with a price range from a few cents to \$10 or even \$20 a pound. At one time China supplied nearly the whole world with tea. Black, green and brick were the three most prominent sorts. But in China tea is grown not in plantations but in small patches on individual farms. Under those conditions there was no advertising agency in position to compete with the world-wide publicity of the famous tea gardens of Ceylon, Darjeeling and Assam.

In the rice section of southern China as many as four crops of that cereal are produced within a year. If you are quick at mental arithmetic you may retort that it requires about 115 days to mature a crop of rice and that there are not 460 days in a year. But in a Chinese farmer's rice year there are 465 days. The seed is sprouted in water-soaked bags and then sown in small nursery beds before being transplanted in the field. The process from moistening the seed to transferring the young plants to the field occupies 25 days. In other words 25 days of the field's time is saved for each of the four crops, or 100 days in the course of

a calendar year, which is practically the same as adding 100 days to the year, 100 days used in the ripening of the four crops of rice while the young plants are getting ready to leave the nursery.

In the lower Yangtze Valley I walked along the wheelbarrow trails among 25 or more small farms. Possibly five percent of the land was occupied by family burial mounds. Quite generally these ancestral mounds cover an undue proportion of fertile soil. The Koreans use rocky slopes of non-agricultural land for burial grounds. The Chinese are coming to that point of view, and thousands of the mounds have been leveled for cultivation. Otherwise very little arable land has an opportunity to lie idle. Some of the land was in wheat. Not an inch of soil lay fallow. A few weeds were trying to get a start in the wheat but the women folks were after them with narrow hoes. As a fringe around the wheat and wherever a square foot of ground was available broad beans were growing. The day after the wheat was harvested the drier portion of these lands would be planted to cotton and the wet parts to rice. Those are the absolute necessities of the farm population. Rice, wheat and beans go into the stomach and cotton on the back. Everybody was dressed in home-grown, home-ginned, home-spun, home-padded, home-woven and home made garments, the num-



DESERT TRAVEL IN MANCHURIA

ber of layers of these clothes to be worn depending on the weather.

Kaoliang is a most useful sorghum. To a Chinese farmer kaoliang is food, forage and construction material. The family gets the seed heads, the donkeys receive the leaves as their portion, while the stems are used for mattings, screens, fences and house construction. In the place of reinforced concrete the Chinese farmer builds houses of tamped earth strengthened with kaoliang stems. Stoves and chimneys are also made of the same materials.

Seemingly the kuomintang will not be under the necessity of hiring agricultural engineers to calculate the proper ratio between food and commercial crops. For the Chinese farmer with or without the benefit of government will produce his own food, clothing, fuel and dwellings. Then if time and weather permit he may grow a little more to sell. Farming is a year round job for him.

X

FAMINES AND FOOD DISTRIBUTION

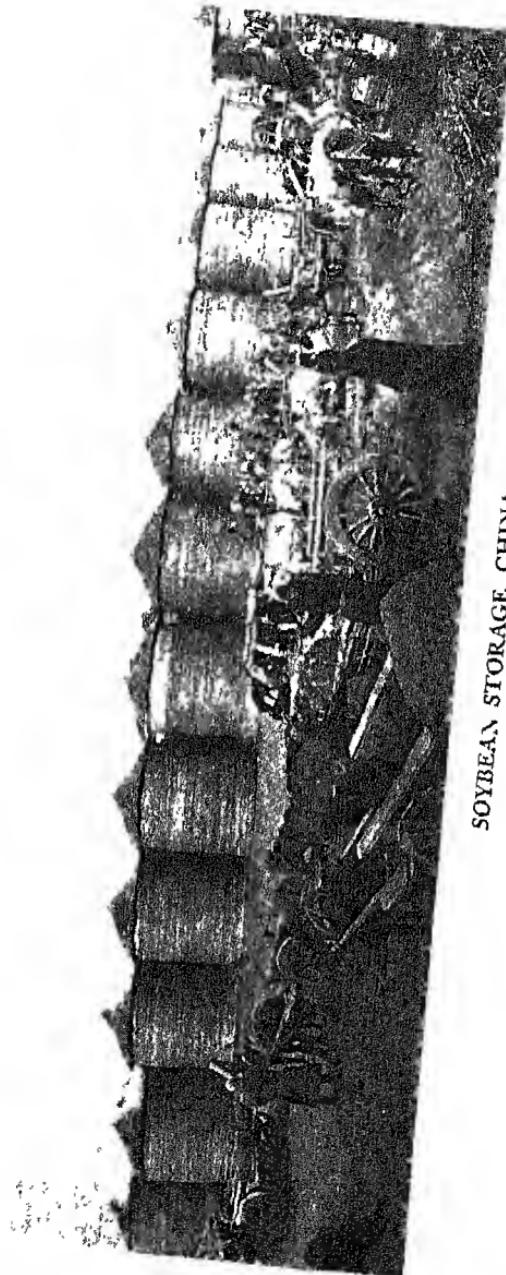
The very idea that famines may occur in various parts of the world today strikes the thoughtful person as an anomaly and casts a doubt on the social instinct and native wit of man. Has man unlearned how to find food and shift for himself? Has he become less capable of feeding himself than a woodchuck or a song sparrow? Thoreau in his hut by Lake Walden found that the common weed purslane made a delicious and satisfying lunch. The chickweed that infests suburban lawns is as savory and nutritious a green as spinach. With no more inquisitiveness and curiosity than an ordinary rabbit one could find within a mile of any large city limits a menu of 100 or more native plants capable of sustaining life, from earliest spring to winter, beginning with dandelions, cowslips or marsh marigold, the young leaves of beech, the roots of sarsaparilla, ginseng and sweet cicely, down through the season with acorns, nuts, berries and wild fruits in profusion and great variety, without taking into account the cultivated plants and domestic animals upon which we normally rely for food.

Nevertheless famines are still prominent in the list of major human catastrophes. They are more prevalent in India than in any other country. Since 650 A.D. there have been over 40 full years of famine in some of which as many as 5,000,000 people died of starvation, the latest one in 1943.

Any detailed analysis of the reasons for the frequent occurrence of famines in India must be undertaken with great caution and with due consideration of the bitter controversies among the authorities that have investigated the matter. On the one hand we are told that India was self-sufficient in food supply until 1931 when the rate of population increase took a sudden spurt. How can that assertion be reconciled with the historic records of famines in the years 650, 1148 to 1159, 1396 to 1407 and the "skull famine" of 1790 to 1792 when so many people died that the living couldn't bury them all?

It has been calculated that the deficit of rice in Bengal is 125,000 tons, in Bihar 80,000 tons and in United Provinces 400,000 tons. These deficits have been filled by imports from Burma and Siam for the most part. While wheat is replacing some of the rice portion of the Hindu diet much of this wheat is sold and exported to get cash to pay land rental and interest charges.

The actual food situation seems to be getting



SOYBEAN STORAGE, CHINA

worse not only quantitatively but, which is more serious, also qualitatively. Even if by imports the cereals required for a normal diet are available, legumes, other vegetables, fats, oils, milk and fruits are not to be had in sufficient quantity. In fact Doctor Mukerjee estimates the total food supply as barely enough for 350 million of India's 400 million people. From 100 dietary surveys carried on since 1936 it was estimated that 100,000,000 people in India are underfed in normal times.

Droughts of wide extent occur every five or six years and in some localities every year. A substantial part of the population, therefore, continually live on the verge of famine conditions. The numerous dietary surveys have shown that with increasing income there is a corresponding increase in the use of milk, vegetables and fruit.

Actual death by starvation in times of food shortage naturally falls heavily on the very poor, constituting about 40 percent of the total population. Poverty, physical debility, high birth rate and excessive rice eating seem to go together, especially in regions of hot and depressing climate. The middle and upper class eat usually but two meals a day of fairly well balanced and diversified items, strictly vegetarian, however.

In India until quite recently little or no serious attention has been given to the scientific study of

the problem by reason of the fatalistic attitude of people and officials. Consequently little use has been made of the recently acquired knowledge of the great variation in the nutritive value of foods under various conditions. Nutritional deficiency diseases being so notoriously prevalent in India and China, attention should have been turned to those large fields for study. Pellagra, beriberi, scurvy, rickets and deficiency in vitamin A are endemic in all southeastern Asia. Dietary specialists have shouted from the house tops the need of eating leafy green and yellow vegetables, tomatoes, citrus fruit and fats.

The pity of it all is that the remedy lies near at hand and has not been used. We are beginning to learn that the first stage of starvation may not be so much due to lack of enough food as to the lack of the right kind of food. J. D. Bernal goes so far as to say that "if the available good agricultural land of the world were worked by the best modern methods, it would provide a food supply between two and ten times the amount required for optimal nutrition."

It has long been known that the composition and dietary value of food crops may be affected by the amount of rainfall during the season of growth. In an excessively rainy season pasture grass may be so watery and deficient in lime and other min-

erals as to substantially reduce the food value of the milk of cows grazing upon these pastures. Serious losses of livestock are suffered where their feed is deficient in lime and phosphorus. Plants used for human or animal food may fail of proper flavor and vitamin content if grown on soil deficient in copper, cobalt, boron or iron. The lack of boron in the soil reduces the protein content of the crops and lowers their carotene value. It requires only minute quantities of these chemicals to produce normal plants, often only a few ounces per acre.

Not only is it vitally important to know whether all the elements needed by plants are present in the soil, but we have learned that different varieties of wheat, barley, rye, oats, tomatoes, onions, lettuce, beans and cabbage, growing side by side on the same soil differ widely in ascorbic acid and other vitamins. Then too in nutrition research at Cornell University it has been discovered that there are lazy loafers in the plant kingdom in other ways than in failing to develop full flavor and composition. Some of them are too indolent to produce a standard dark green chlorophyl in their leaves and thus dawdle along during the summer as pale anemic specimens.

Again, climate influences the vitamin content of plants. The amount of vitamin C in tomatoes

varies from region to region. Tomatoes grown out of doors in summer are higher in vitamins A and C than winter tomatoes from green houses. Finally, about 25 percent of the total calories in a diet must come from fats or else the taste is flat and the food fails to satisfy. One fat seems to be as good as another whether vegetable or animal.

All these and other results of research in nutrition may be used to good purpose in helping the peasants in densely populated areas toward a more healthy and vigorous physical condition. In India and China the cereal supplies are most nearly adequate in quantity. The undernourished usually do not need more rice, but more milk, eggs, fish, fruits and vegetables. In Madras for example the average per capita consumption of cereals is 432 pounds annually but only 2 pounds of meat, 16 of milk, 6 of fish and not over a half dozen eggs.

Obviously the religious tabu against meat makes it particularly difficult for the Hindu to subsist in case of crop failure. Eggs would help immensely and hens are capable of laying eggs and cackling quite cheerfully where the pickings are very poor. The amazing egg production of China comes almost wholly from farm flocks of hens that find a living on what would otherwise be waste. One can't blame the natives for not eating the pork produced in India. It's poor and without savor.

But as I traveled through India I felt that I must be leaving behind me a trail of egg shells and chicken feathers.

Both in its content of protein, vitamins and mineral salts and also in its energy value the Hindu peasant's diet is below par. The standard



NATIVE HUMPED CATTLE, CHINA

for an active farmer in the United States is 3500 to 4000 calories. But the diet of the ryot gives him only 1700 to 2000 calories of energy. It's hard to say at just what point in the downward trend of food intake starvation begins. But in the case of the poverty stricken rice eater who consumes, according to recent surveys, only $1\frac{1}{2}$ ounces of fish, eggs and meat per day, two to 5 ounces of root

vegetables and less than an ounce of vegetable oil, he is surely in the realm of famine. And it should be borne in mind that green vegetables, milk and fruit are rare components of his diet.

The stamina and health of urban residents may also droop from the use of deficient diets. The very artificial conditions of city life in modern times may lead to unwise food combinations of insufficient variety as compared with the menus of primitive man. In recent nutrition experiments white rats fed on a diet prevalent among city dwellers became diseased, nervous, quarrelsome and cannibalistic, but when given the simple, natural diet of some Indian hill tribes were fertile, gentle and healthy.

Thus it seems that the right way to find an answer to the problem of famines and malnutrition is to go back to nature and ask her wherein we have strayed from the path of wisdom. When, as I have frequently seen, sheep and cows instantly recognize the difference in flavor and palatability between forage grown on well fertilized soils and that on worn-out land, and unfailingly choose the former, are human beings not capable of doing likewise? Dietary studies remind us with constant reiteration that plants attain full flavor only on fertile soils, that full flavored plants show in their composition a better balance in protein, vitamins,

mineral salts and those delicate essential oils upon which their natural aroma depends, and that full-flavored plants mean more nutritious meats, eggs, milk and better men.

The degree of sub-nutrition in India is of course not uniform either in time or place. There are areas that usually receive abundant rainfall, or are artificially irrigated. And there are less favored areas subject to recurrent drouth where the people live constantly on the fringe of famine. There are regions where the income of the population fluctuates with the world demand for the cash crops of those localities. But the unpleasant fact remains that a large percentage of the Indian peasants fail to get enough to eat, and most of those who get enough do not get the right kind of food. And that's the beginning of starvation or famine, or malnutrition, leading through emaciation, or pellagra, or beriberi to death.

Fish occupy a surprisingly unimportant place in the diet of India. One instinctively thinks of the situation in Thailand or Siam. There rice is the chief export crop. In traveling from Bangkok to the Cambodian frontier through hundreds of square miles of continuous rice there are no roads. The farmers travel exclusively by water. Long slim canoes glide through the narrow canals that thread the interminable sea of rice. In a canoe the

farmer may go fishing, or visiting, or to his field work, or to market. The narrow canal that runs past his home connects with a wider one which in turn is part of the Menam River system. Fish abound in the river, the canals and in the rice-fields. While the women are wading in the water that covers the rice-fields, pulling weeds or transplanting rice from the nursery beds the children may be seen catching fish for supper. The solemn adjutant bird poised on his long stilt-like legs is also waiting for a fish to come his way. This rice country is in fact a vast agricultural Venice in which gondolas are replaced with dug-out canoes. But, much more to the purpose from a nutrition standpoint, it is a combination rice empire and fish pond. And fish go a long way in supplement-



NATIVE HUMPED CATTLE, CHINA

ing a rice diet. Incidentally too Buddhism is the state religion in Siam but it does not put a tabu on fish.

Many a Hindu ryot could not set aside land to produce fodder for his livestock. His cattle and goats must find weeds and other pickings along the roadside. But in desperate shortage of fodder, tree leaves are extensively used for feeding cattle, sheep and goats especially in the provinces of Bombay, Orissa and Madras. Leaves of the jujube, mango, tamarind and bamboo have proved satisfactory as emergency forage. These leaves on analysis were found to be richer in nutrients than grasses and non-leguminous forage of the locality, rating high in their content of lime and protein. However the cows relish only the jujube and fig leaves and all the tree leaves are low in digestibility especially in the hot, dry season where an extra supply of fodder is most sought.

The Indian buffalo is an efficient producer of milk, which is much used not only in India but also in the Philippines, other Asiatic countries, Hungary and elsewhere. Buffalo milk contains $7\frac{1}{2}$ percent of fat, 6 percent casein and 4 percent milk sugar as compared with an average of 4 percent fat and 3 percent casein in the milk of our dairy breeds. The fat content of milk from Brahman cattle is about one percent higher than that

of our cows. But the richness in the composition of buffalo and zebu milk falls far short of compensating for the shortage in quantity available for human use in India.

While India has been afflicted with a larger number of wide spread famines, sometimes covering nearly the whole country, and lasting from two to twelve years, China has suffered from a greater number of famines usually local in extent and short of duration. In fact thousands of famines have been recorded in her historic records, most often occurring in the northern part of the country. The latest serious famine in China occurred in 1921 and 1922. For the most part Chinese famines have been due to floods, drouths or insect visitations.

American and European travelers who have chanced to be in China or India during a period of famine have often remarked on the apparent indifference and callousness of orientals to suffering and death. But the universality of distress within the geographic limits of the famine goes far toward explaining this attitude. One starving mortal couldn't help another, no matter how much he might wish to do so. A famine is not a pleasant sight, as any Red Cross worker who has been through one can testify. In the midst of the dead and dying, and gnawed by the pangs of hun-

ger, men, women and children, according to their temperament, become panicky, or raving mad, or sink into complete impassivity. To be the good Samaritan to one who has fallen by the roadside one must have food or money or medicine or comfort to spare, but the starving have none of these.

But, some one will ask, when an almost complete crop failure has occurred why not utilize milk to the fullest possible extent? Well, at such times the cattle, buffaloes and goats are also undernourished, the milk flow dwindles toward zero, and what there is lacks much in nutritive value by reason of deterioration of breed and defective feeding. Moreover it is likely to be contaminated with bacteria and therefore dangerous to health. So far all schemes for the improvement of the milk supply in India have proved impractical because they put the milk out of reach of the masses in price. Buffaloes give more milk than cattle but are rather heavy feeders, calve in September or October and give no milk in hot weather. One buffalo and two zebu cows per farm furnish a fairly even distribution of milk over the year. But to produce milk at all they must have more feed than is required for the mere maintenance of their own lives. And the increasing pressure of population on land for the production of human food results in curtailing rather than expanding

the acreage of pasture. When the average milk yield of the Indian cow even under normal conditions is only two to five pounds per day, it is easy to imagine what happens in years of dry and short pasturage. At best the milk consumption of the Hindu is only about one-third what it should be to balance the inadequacy of his vegetarian diet.

Plagues of grasshoppers in India and China as well as in various other parts of the world may cause almost total destruction of crops in the infested areas. In India I have seen a field of rice utterly consumed in a few hours by the devouring horde of hoppers, that also stripped trees of their foliage. The peasants beat on metallic vessels and wave pieces of cloth to frighten the hoppers but they merely fly to another field. The Chinese use similar tactics, but when human help no longer avails call is made on a professional magician who tries by occult ceremonies to break the drouth, stop the flood or disperse the locusts as the occasion may require. The government discountenances all such ceremonies but they still persist.

The vampire policy of Japan of sucking the very life blood out of every region she conquers has laid a heavy hand on China. Everything from sugar to steel fixtures has been seized and carried away to Japan.

For many years philanthropic Chinese have pro-

vided funds for the study of native wild plants which might serve as emergency food in time of stress. Some thousand or more such plants have been found of use as life savers.

Again as an example of the intensive manner in



DAIRY BUFFALO, INDIA

which farm land may be cultivated as a safeguard against a possible shortage of food the report of a survey of 102 farms near Wuhu, China, is encouraging. These farms with a total area of 424 acres and a farm population of 588 persons showed 98.6 percent of the land under cultivation. Ditches, division lines and threshing floors accounted for the rest, the farmers living in the village. The diet of this little farm community consisted of eggs,

chickens, wheat, beans and peas. In this area, it will be noted, 588 persons subsisted comfortably on 424 acres of crop land.

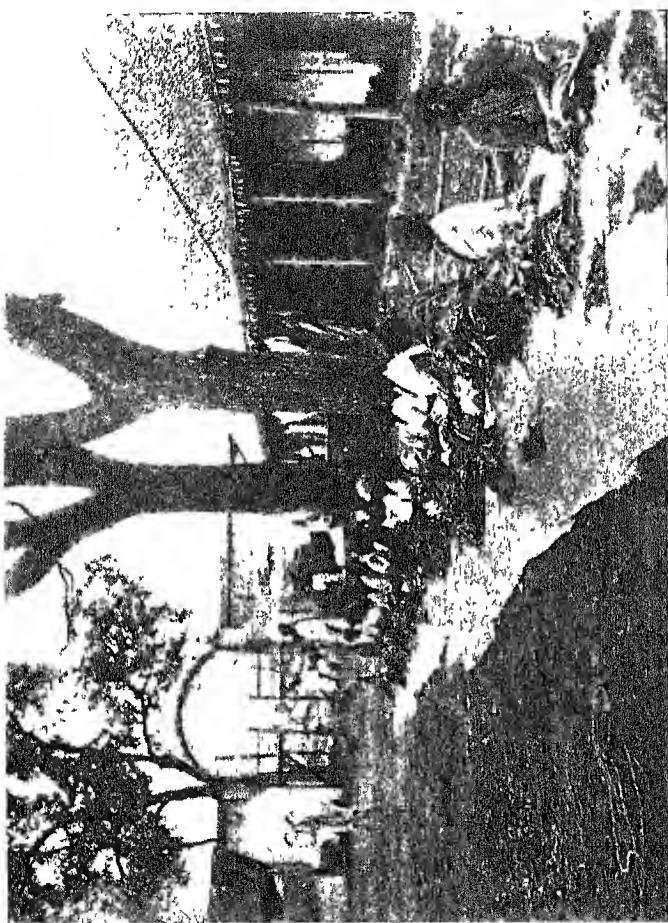
In a discussion of the fragmentation of land holdings in India and its bearing on inefficient production and the shortage of food D. R. Gadgil of Poona calls attention to the fact that "a more or less equal division of land among heirs is a very common rule, not peculiar to India. Not in other countries, however, is there to be observed a progressive subdivision. Further the law of inheritance indicates merely a division of the right of ownership and has no necessary connection with the unit of cultivation. Large and jointly held areas of cultivating units have been traditional in India. Its breakup in recent decades is the result of a pressure of population and a lack of alternative employment. Of recent years the concept of an economic size of holding has been discussed as a matter for legislation. Any such effort, however, immediately raises the problem of the displaced population and it cannot be undertaken except as part of a comprehensive planning of all employment."

Thus once more we are temporarily led to believe that a way out has been found from this modern labyrinth of the famine minotaur but no Ariadne appears with the thread that alone can guide

Theseus to victory. A committee of the League of Nations reported "there is no country in the world today in which conditions of nutrition and health could not be improved with government help and direction. There is no country in which further measures to awaken public opinion are not imperatively required."

The Committee on Cooperation at Madras directs attention to another phase of the problem. "In no aspect of agriculture is India so backward as in animal husbandry. She has the largest cattle population of the world, but her animals are in efficiency probably among the poorest. There has been a progressive deterioration in their condition. In the last hundred years the human population has increased fast, land formerly available for grazing has been taken up for cultivation, and to meet the extra demand for work animals their numbers have been multiplied without any improvement in their quality."

But where cattle and buffaloes are looked upon primarily as work animals, secondarily as a source of milk and almost not at all for their great food value, what assurance is there that with the continuing increase in population and the reduction of the grazing area India will not cease relying on work animals for power and replace them with gasoline and man power? On small Chinese farms



HINDU TOBACCO MARKET

all work is done by human hands. There is absolutely no room for work animals under such conditions. A Chinese family can easily live on the produce of three or four acres. A pair of oxen would require all that area to be planted in grass and other forage for their maintenance, leaving nothing for the human family.

All students of the food problems of India agree that no solution is in sight so long as the present subdivision of the land into holdings of microscopic size continues. There is also general agreement on the proposition that more land must be brought into cultivation, if future famines among a growing population are to be avoided. Where, then, do work animals come into that picture especially if the land should be consolidated into 50 or 100-acre units on which tractors and other power machinery could be profitably operated?

Thus, like the visitors in a labyrinth after each trial we find ourselves back at the same spot where we have been a dozen times before and seem to be no nearer the exit. The obstacles, the dead ends, and the enigmas are no fewer. We still face the mounting population, declining yields, further subdivision of holdings, deterioration of livestock, inadequate food supply, high rental and interest charges, lack of sanitation, prevalence of disease, illiteracy, the lethargy of oriental fatalism, diffi-

culties in the way of community cooperation between the many castes and religions and a central government without very definite plans for attacking the problem.

Perhaps the peasants themselves, under the sheer necessity of self preservation, will have to break through the existing inertia, doubt and hesitation and set things in motion. It has been done on various occasions in other parts of the world when no other help seemed to be forthcoming. The primary necessity of every human being and every nation is to secure the food to sustain life. Man has been living on this earth long enough to have learned how to take that kindergarten step toward the establishment of a lasting civilization.

XI

POST-WAR TRADE WITH CHINA AND INDIA

It may seem presumptuous to discuss at all the subject of future international commerce. No definite trend of trade currents has become established. No one can say with any assurance what will be the volume, character or conditions of trade. The whole system of normal routes, and exchange were knocked into a cocked hat by military operations. Necessarily trade has been confined to military and vital civilian requirements. The normal source of many familiar necessities was cut off, and desperate efforts have been put forth to find other natural supplies of these commodities, or to manufacture synthetic substitutes. We have experimented with considerable success in the production of many tropical crops in localities not in the war zone or where heretofore they were not being grown commercially, or not in sufficient volume to bulk large in world markets.

In various countries of Latin America more or less serious undertakings are in progress in growing manila hemp, cinchona, rubber, derris, spices

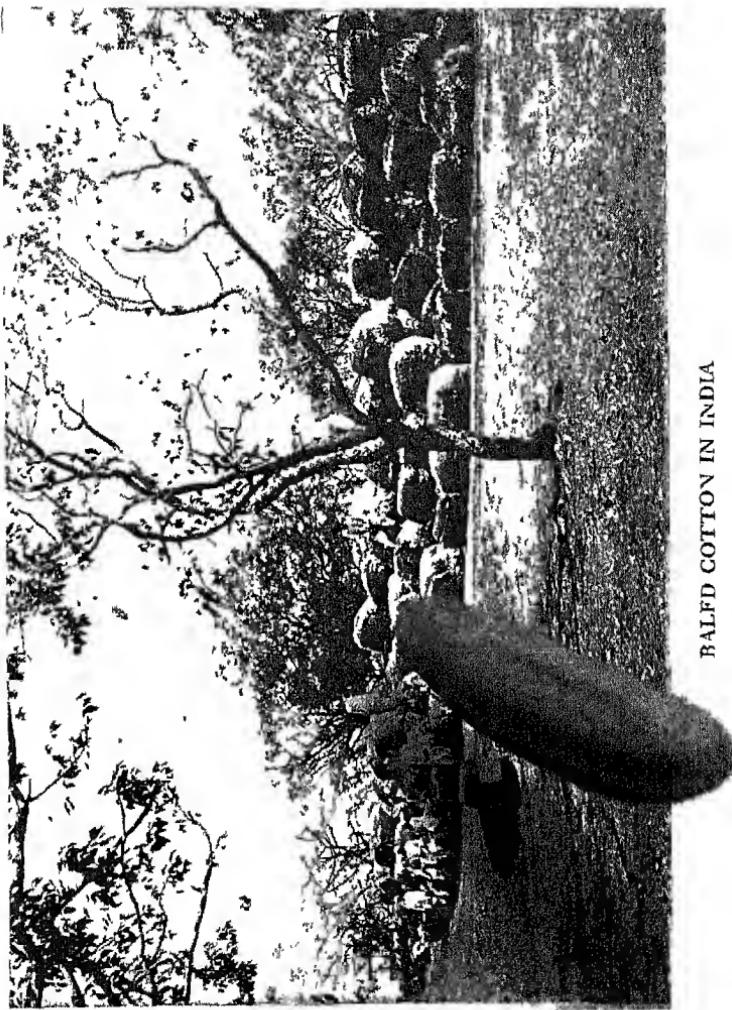
and a dozen or more other crops that had in peace-times been obtainable in the orient. In the readjustments incidental to the restoration of normal conditions it seems unlikely that cheap oriental laborers will be as easily secured in the unlimited numbers of former times for the operation of tropical plantations. In that case new plantations started in Latin America, especially with the more productive varieties of these crops, which have been bred, may be able to compete with the orient.

The world-wide anarchy in shipping created by the war made it difficult or impossible to secure many commodities which had come to be considered indispensable to civilized life. That situation in turn has caused a pronounced swing of the economic pendulum toward nationalism and self sufficiency. India and China have felt the impact of that political doctrine most keenly. Being almost at the foot of the ladder of industrialization, the leaders in both these countries as well as in all agricultural, non-industrial regions of the globe are preaching the immediate need of home manufacturing for domestic requirements.

In the first place, China and India will be brought closer together by the new motor roads and series of air fields across Burma from Assam. Previously they were poles apart, separated by long and tedious water routes. There have re-

cently been frequent exchanges of felicitations between their leaders and the two races are beginning to understand each other as never before. The oriental appraisal of the white man has not always been a flattering one. In the far east we were catalogued as wearing clean linen, drinking whiskey and soda, doing no work and claiming a superiority over the orientals. Attention is often directed to the fact that in numbers the ratio of colored races to white is 2 to 1, and that the superiority of the white race is not so apparent as was claimed. The ease with which the Japanese took Singapore and the Dutch East Indies is still fresh in mind.

Moreover, to the oriental democracy is an anomaly. Solomon, Genghis Khan, Tamerlane, Kemal and Stalin are their heroes. A patriarchal, paternalistic government is their ideal, with an absolute monarch at the head. Kipling was right, in one sense at least. Politically the East and West have not met. In singling out the Philippines as an exception it has been said that "under the most remarkable colonial guidance in history an oriental nation was converted to faith in democracy." But the Filipino has been out of touch with oriental philosophy for ages. His dealings have been more with the Western nations. It would seem, however, that the Philippines might be the com-



BALFD COTTON IN INDIA

mon meeting ground where the East and West could come to understand each other. It is unlikely that this miracle of understanding will be duplicated in India and perhaps not in China so rapidly as in the Philippines where it took place in our generation. "But till something similar does occur in Asia the East and West have not met."

International likes and dislikes have been keenly sharpened by the war. The mutual attitudes of nations and races toward one another may become quite a factor in determining their trade relations. Japan by her materialistic beastliness has incurred wide spread ill will. Cocky Nazi goosesteppers will find themselves less popular than formerly in many parts of the globe. The Hindus and Chinese are naturally rather sensitive to what is said about them. And while trade often rides rough-shod over international animosities and friendships, these deep feelings even if mistaken and unfounded are not to be overlooked.

In shaping their future trade relations China and India have reasons to remember the behavior of Western nations toward them. As expressed by Theodore Roosevelt Jr. "Country after country was taken over, and one European nation after another scrambled for its share of the spoils. India, Burma, Indo-China and the Malay Archipelago

were in turn subdued and annexed. China herself was considered as next in line. Indeed, the probabilities are that China was, at least in a measure, saved merely through the jealousy of the contending powers. All this climaxed at the time of the Boxer Rebellion. At that moment if the chancellories of the world had been asked to express their opinion as to the future, they would have unhesitatingly stated that the partition of China was inevitable." It goes without saying that Chinese and Hindus are quick to note friendly and unfriendly references in the speeches of responsible officials of Western nations. Like other military weak, or subject countries or small nations they are anxiously scanning the powder-blackened and hatred-maddened horizon, wondering if and where a sympathetic voice may be heard that may serve as the advocate of their claim to a place among the peoples of the earth. Other things being equal they will hope to establish trade and diplomatic relations with friendly peoples.

For some time to come the likelihood is that a large part of international trade will be state-regulated or conducted through government operated exchanges. All trade may be subject to political as well as economic consideration. That introduces one more unpredictable element into the affair.

Again as J. B. Condliffe suggests "One of the most characteristic developments of our industrial age has been the reaching out of great industrial enterprises to secure sources of raw materials in foreign countries. The necessity to do so has been a factor in the development of rubber plantations, oil reserves, tin deposits, forests and mines."

The opportunities for technical assistance and investment in India and China will be immense. But these opportunities are fraught with grave possibilities for both good and evil. There may be a mad scramble among the great powers to achieve control by investment, special trade relations, or good will preferences, resulting in bitter rivalries and mutual friction. Is the help offered to India and China, as well as to colonies and small countries, to be an unregulated rough and tumble fight or an orderly allotment of the program among the nations that may participate and may derive mutual profit from the procedure?

One may reasonably ask also how Europe and America can finance the industrialization of China and India in the face of the fantastic indebtedness we have already incurred in conducting the war. Europe has first to be born again, to recreate herself, to rebuild her destroyed cities and manufacturing plants. Colin Clark has estimated that India and China will absorb $11\frac{1}{2}$ billion dollars

of foreign capital per year for the first decade of rehabilitation. Where are such sums to be found?



SOYBEAN CAKES IN MANCHURIA

Even if Europe and America could loan that amount, will India and China submit to the shackles of control by foreign money? If free to work out their own salvation those countries may

bypass many of our unwise attempts to subsidize and protect industrial and agricultural enterprises which are not capable of meeting world competition. Holland and Denmark found it more profitable to import grain feeds and to produce butter, eggs and horticultural specialities.

All progress in India and China will automatically enhance their power for good or ill. China already plans a strong military development. Will an industrialized and technically developed China and India mean merely new Japans and Nazis, or will they seek international peace and an orderly system of life on the globe?

Nor can we be sure how strategic bases and air-fields may be used to affect the control of trade and the development of colonies. But it would appear important for us, however we may feel about the colonial problems, not to antagonize unduly England, Holland, France and Belgium in their attitude toward this extremely delicate phase of peace negotiations. Some of the colonials are beginning to argue that Europe today, just as periodically it has done for centuries, exhibits the spectacle of greater chaos and confusion than any other part of the world. How then may Europeans pretend that they alone know how to bring peace and order to India, China, Malaya, the Pacific islands and Africa?

Again the pressure of population upon the potential food supplies is likely to cause serious economic disturbances unless the rate of increase is checked. Industrialization and economic progress will probably lower the death rate by reason of better food, clothing, housing, drainage, sanitation and prevention of disease. This result has followed wherever industrialization has taken place. Already a drop in the death rate in India and China has occurred from that cause as well as from better political conditions and less internal disorder. But when better food and clothing, better sanitation and medical service come into play, the death rate may drop precipitately and the growth of population may show an enormous spurt. "Such great surplus of births over deaths might create a serious population pressure and even wipe out the gains in standard of living achieved by economic development."

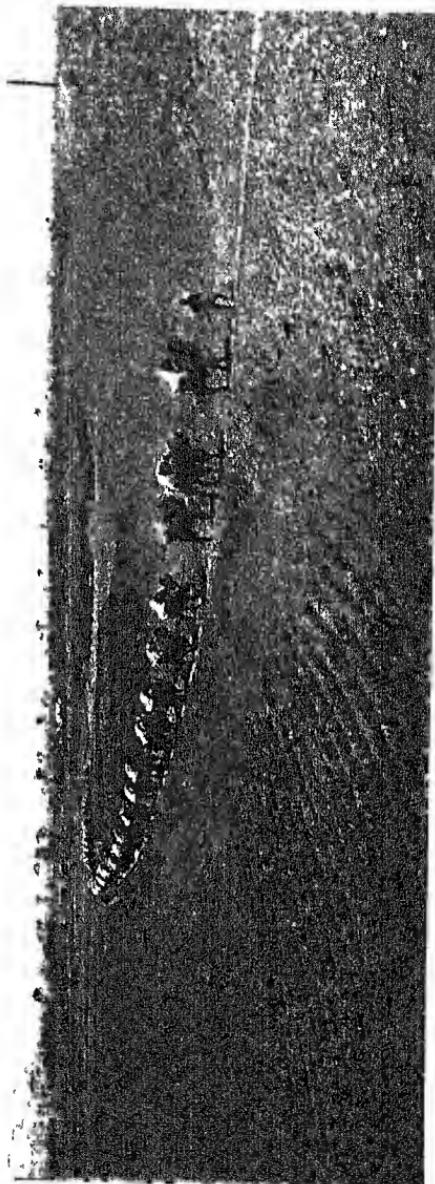
On the other hand if improvement in techniques and mechanical skills and equipment advance more rapidly than the growth of population, the danger of overpopulation may be avoided partly by a drop in the birth rate which usually follows a higher standard of living. India and China may then continue to be content with far less luxury than prevails in the United States and may feel comfortable in what would to us be con-

sidered fantastic and unbearable densities of population.

Birth rates may also drop mainly as a result of the voluntary limitation of the size of families. In this process population may greatly increase because birth rate drops much more slowly than death rate during industrialization. Witness Western Europe where the population increased steadily and rapidly from 1800 to 1900 but is now declining.

In all these problematical matters no one can predict which way the pendulum will swing during the next decade nor the amplitude of the swing. But taken together they will surely exercise a profound influence on the internal development and foreign trade of India and China as well as of the rest of the world.

Turning now to a few phases of this problem that are so certainly in the offing as to be hardly debatable, it may be confidently asserted that an unparalleled scramble for foreign trade is actually, so to speak, in rehearsal. Jealousies long suppressed by military operations are not long to be held in restraint. Col. Oliver Stanley, British Secretary of State for the Colonies has announced that "Britain is pledged to a constructive trusteeship for the colonies. It is high time that more light was thrown on the darkness of our sadly de-



CAMEL TRAIN IN NORTH CHINA

pleted export trade with the colonies, due largely to the activities of the United States." Everywhere in the very hurly burly of war, in the avalanches of news releases and more serious propaganda material, the ultimate aim of recovering any lost foreign trade is made manifest.

No doubt can be reasonably entertained that as soon as safe sea traffic is assured we shall be glad to resume importing jute and lac from India and tung oil and bristles from China. War has not altered our need of those commodities nor disclosed any better source of them.

India has long held a virtual monopoly of jute production with an area varying from four to six million acres and an output of nine to thirteen million bales, grown mostly in the province of Bengal. In 1940 over 570,000 tons were exported chiefly to England and the United States. Jute is admirably adapted for rope making. After petroleum, rubber, explosives and steel, perhaps no other commodity is more essential to civilian and military uses. "On land its use in tents, tarpaulins, lines for dragging guns into position and rope for general utility purposes is familiar. At sea rope is essential for mooring lines, towing lines and other fittings. Every ton of new shipping requires one pound of cordage." Jute is superior to hemp for rope in tensile strength and flexibility. Hemp

rope endures wear on pulley blocks but loses strength in water, while jute gains strength slightly in water. When shipments of jute were stopped by war and U-boats were sinking all ships carrying henequen from Yucatan the United States increased the area of hemp from the usual 3,000 acres to 130,000 acres or more to produce 75,000,000 pounds of hemp fiber for use in 1943 and 1944. But jute fiber can be laid down in our ports, after shipment from India, at a price so far below the cost of producing hemp that we shall doubtless import jute again as soon as it is available.

We imported over 6,000,000 pounds of lac from India in 1940 for use in varnishes, paints, gramophone records, bangles, jewelry and for many other purposes such as sealing wax and waterproof ink. About 11,000 tons of shellac are used yearly in gramophone records.

Tung oil or wood oil has become the agricultural leader among the exports of China, with a normal production of over 300,000,000 pounds of which 50 per cent is exported, chiefly to the United States. When the Japanese invasion of China cut off our supply from that source, orchards of tung trees were planted in the Gulf States where the industry is thriving with an annual production of 9,000,000 pounds of tung oil. But that is only a

drop in the bucket. We had been importing 100,-000,000 pounds and could use five times that amount if it were available. The Chinese are preparing to increase their output and we are sure to import large quantities again when conditions permit normal sea traffic. In China tung oil is used for making gasoline, waterproofing of cloth, wood and umbrella paper, in lacquer, paints and for medicine.

Animal hair and bristles rate high in our imports from China. Two outstanding types of hogs are raised in China, in the south a fat, sway-back hog and in the north a slab-sided hog resembling our razor-back and as bristly as a porcupine. At a little distance he appears to be 50 percent bristles.

As the world recovers from its present chaos we shall naturally resume taking some of our supplies of silk, silk piece goods, tea, eggs, peanuts, goat skins and other products from China and sending her in return diesel oil, lubricating oil, kerosene and a great variety of manufactures. And from India will come tea, cashew nuts, tobacco, short-staple cotton. China also has deposits of tin, tungsten and antimony far beyond her own needs, while India in good crop years may even export wheat and corn.

The share of the import trade of China and India that falls to the United States will depend

of course partly on internal conditions in those countries. The dislocations caused by the war may entail great disillusionment, disappointment, cynicism, mutual suspicion and hatreds, and general unrest. No agreement may be reached on where to place the blame for human suffering and material destruction, or who shall be made to pay for it all. The idea of the utter futility of the ghastly sacrifice may take possession of millions of people and for a time delay the return to normal human thinking and action.

Their political status will greatly affect the production and international trade of China and India. The conference of the United Nations at Bretton Woods proposed to make short term loans to China and other Asiatic countries with no political strings attached to the loans. If that proposal is carried into effect, those countries may then start ambitious programs of general industrialization without the usual humiliating political commitments.

The first step in the creation of a lasting peace in which trade may be resumed is the establishment of an international military police under pledge to use overwhelming force to restrain world piracy. Then commissions may be set up to study labor, trade, food, sanitation, and credit on a global scale. If these commissions work together,

not independently or at cross purposes, progress may be made. But such plans must not be limited to mere cartels in which the interests of producers alone are considered. The welfare of unorganized consumers must be included. The control of price alone is useless. Witness the futile attempts in that direction with rubber, sugar and coffee. Can unnecessary barriers be removed and world trade be unshackled? If so the trade of the United States with China and India will surely be ample in volume and satisfactory in mutual advantages and profit.

XII

POLITICAL AND RELIGIOUS DISSENSIONS

Dissensions are no new phenomena. It is recorded that when Paul declared himself a Pharisee "there arose a dissension between the Pharisees and the Sadducees, and the multitude was divided" during which Roman soldiers had to protect Paul from being pulled in pieces by the mob. Without dissensions there might be no wars or other disturbances. There might also be no progress, just a *status quo* to the end of time.

But such quietude is soon broken by those who can't endure changelessness. Julius Caesar put the blame on thin, angular persons:

"Let me have men about me that are fat,
Sleek-headed men and such as sleep o' nights.
Yond Cassius has a lean and hungry look.
He thinks too much. Such men are dangerous.
He is a great observer and he looks
Quite through the deeds of men."

Then along come our psychologists and physiologists to tell us that life should perhaps be lived

in alternating rhythms of urban and rural activity, of manual work and concentrated thinking, of contemplation and dreams and swift action. They assure us that the brain contains myriads of dormant cells never called into use. But perhaps a more comfortable philosophy is preached without words or argument by the turtle, the elephant and the swan. They worry not at all about the immortality of their souls or about who will be the next prime minister. And their lives are long and happy in contrast with the nervous squirrel that jitters his life away in a few short years. Heresy that it is even to think it, perhaps the lazy live longer.

But the Chinese coolie can't find the leisure to lengthen his life by laziness. The word coolie means bitter effort, and that's what life is to the coolie. He has no time and fortunately no inclination toward dissensious arguments about religion. Religion to him is just a practical view of the meaning of life. Sects, denominations and religious and metaphysical beliefs of whatever sort are merely different phases of religion. As mentioned in the chapter on that subject, the Chinese see no reason why the Moslem, Buddhists, Jains, Brahmins, Parsees, Confucionists, ancestor-worshippers, joss devotees and Christians should quarrel. Chinese may accept the essential points of all these

forms of worship quite without a feeling of any incongruity. There never was an established church in China, and complete religious freedom has always prevailed.

A Chinese may therefore worship his ancestors, be a follower of Confucius, and join the Taoists, Buddhist and Christian sects all at the same time.

In the China yearbook for 1943 appeared an interesting discussion of the activities of foreign missionaries during the war. Protestant and Catholic missionaries have cooperated fully in every community. Only one relief committee is recognized in each community, and it must be international and interdenominational, including Buddhists and other sects. Missionaries of all denominations had previously cooperated heartily on such occasions as the famine in Honan Province. They are cooperating now in the stupendous literary enterprise of translating into Chinese the religious classics from the time of the apostolic fathers to date, including Augustine, Aquinas, Luther, Calvin and many others. The Chinese are thus to be provided with the broadest possible authentic source material for the study of the origin, growth, significance and appeal of religious doctrines. Thus in religious tolerance China appears to be unique among the nations of the world. The Chinese find no ground for quarrels in that field.

Politics in China presents a very different picture. Until the revolution of 1911 the people of China as a whole were practically prevented from taking any part in government except local village matters. Government was the monopoly of the official class. In fact under the Manchus derogatory remarks about officials were a capital offense. For many years Dr. Sun Yat Sen had been collecting funds from Chinese expatriated in various foreign countries and from all possible sources. At the same time he was organizing a group of young revolutionaries who might overthrow the Manchu dynasty by a sudden coup. Necessarily, however, this movement was carried forward with the greatest secrecy. Only a few of his trusted lieutenants shared the whole measure of his plans for the future of the republic which he envisioned and which had taken shape in his mind under the influence of the teachings of Karl Marx.

Few Chinese, therefore, had any conception of the purport of the revolution. To most of them it was merely a change of rulers. Dr. Sun's three fundamentals—nationalism, democracy and livelihood were abstractions that meant little to the coolie. But if the republic was to stand, something of their meaning must be brought home to the coolie. That task gave the Russians an opportunity to acquire large influence in the political life

of China. Dr. Sun was at first in sympathy with the Chinese communists as holding social aims similar to those of Marx and though he later repudiated Marxism, he did not antagonize the Chinese followers of the hammer and sickle.

At no time since 1911 has there been a completely united China. The war lords of different provinces have clashed with one another, disregarding the authority of a central government. Gradually China as a whole became aligned under two principal factions, the Kuomintang or Nationalist Party and the Chinese Communists, the latter being somewhat under the influence of the Russians. Soviet armies occupied Sinkiang with the object of stopping the Japanese advance toward the northwest.

That move created a virtual state of civil war. A large Nationalist military force was maintained near the boundary of Sinkiang to watch the activities of the Russians and later to prevent any activity of the Chinese Communist troops in the northwest provinces. For some time these troops had protested that they should be allowed to take an active part against the Japanese. Chiang Kai-shek held out against their participation until the Chinese situation became so desperate that help from any source was vital. The return of Dr. T. V. Soong to the chief administrative post under the

Generalissimo symbolizes the recognition of the communists' contention, and thus at last a united China is perhaps nearer realization than at any previous time in the 40 centuries of its existence. The voluntary withdrawal of the Russians from Sinkiang is another hopeful sign.

Meanwhile what's happening all over the rest of the world is of course happening in China—the centralization of all political authority and administrative power in one man whether he be labeled King, emperor, dictator, president, or generalissimo. Courts and parliaments bow to his beck and call. In China the Kuomintang was organized as the national party, the only political party in the country, like the Nazis in Germany, the Communists in Russia, and the Fascists in Italy. It was the established State political party, corresponding in power and ruthless intolerance to most examples of an established State Church. Any un-conformity with an exclusive State-established political party is heresy or treason, as the party may decide.

The Kuomintang never numbered more than a million members. It was merely the official set and ruled over a country of 400,000,000 people. Sun Fo, the brilliant son of Dr. Sun, proposed that the Kuomintang should create the machinery for a genuine republic, such as his father had contem-

plated, and then turn the governing power over to the people. But the exigencies of war have made Chiang Kai-shek an absolute autocrat, and the political dress that China will wear at her coming-out party in peace time is anybody's guess.

In India religion is a rather more serious matter, or perhaps more exclusive, than in China. A person cannot be a Yogi, Bahai, Buddhist, Christian, Jain, Sikh, and Brahmanist all at the same time. But only two of these sects clash to such a degree as to be reported in the foreign press. It is rash on the part of a foreigner to attempt an appraisal of the seriousness of the dissensions between the Orthodox Hindus and the Moslems. Most of the conflicts I observed or heard of while in India seemed to me much more trivial than I had pictured them before visiting the country. Such disturbances as occurred were obviously not organized or prearranged, but rather accidental or the pranks of a few waggish individuals. The Moslems dislike any noise, particularly bells, near the Mosque at a time of prayer service. Occasionally some Hindus would break the solemnity of the Mohammedan ritual by jangling bells outside the Mosque. A moslem might kill one of the sacred cows within sight of Hindus. Such cases of mischievous nagging naturally caused bad blood. But statements averring the impossibility

of cooperation between the vast majority of responsible Moslems and Hindus will hardly stand up under the test of experience. Such statements at once fall under suspicion for the reason that they long have been stock arguments of the opponents of independence of India. We should thereby be asked to believe that if left to their own devices the Moslems and Hindus would start such a violent religious conflict as to split the country wide asunder and render any system of self government impossible.

But they have lived together for generations without serious race wars. The sessions of the Congress Party, comprising Moslems, Hindus and other sects, have been conducted without fist-cuffs or throwing of ink wells. In the U. S. there are members of one denomination who are so intolerant that they will not step into the church edifice of another sect. We have occasional race riots. We have anti-semitics, anti-catholics, anti-Ku Kluxers, anti-communists, anti-poll-taxers, anti-New Dealers and anti-other-ideas. But we grow fat and prosperous on this mixed diet of plainly incompatible and antagonistic ideas. A variety of ideas as well as a variety of foods seems essential to the growth of an individual or a nation.

It would require too much space and perhaps

would serve no good purpose to review the political history of India through the eons of its varied experiences. The present attitudes of the most vocal representatives of the various Indian factions have largely taken shape in the political controversies that have raged since 1900.

The India Act, passed by the British Parliament in 1919, provided a constitution "for the gradual development of self-governing institutions" as phrased in the act, "and the manner of advance can be determined only by Parliament" which apparently meant that Parliament alone could decide whether or not India was advancing in the right direction. Under this constitution the general legislature of India might pass laws but they could be vetoed by the Governor General, who could also declare laws on his own responsibility, if the laws passed by the legislature were not to his liking. Each of the larger provinces was under the administration of a governor who ruled by a complicated system commonly nicknamed dyarchy whereby subjects for possible legislation were classified in two groups: "Reserved" subjects and "transferred" subjects as explained in a previous chapter.

The advocates of wider participation of the native Indian in political matters protested that the Governor General and the provincial governors,

all appointed by the British Parliament, had the final say in practically all legislative proposals. The legislative council in each province was composed of 30 per cent officials and a majority of elected members. But the franchise rested on a high property qualification with the result that less than 6,000,000 persons in all India had the right to vote.

This plan was wholly unsatisfactory to the Indians. The demand for a larger share in the government became more and more insistent and clamorous. Uprisings of an increasingly ominous nature occurred, once or twice acquiring the proportion of an incipient rebellion.

Finally in 1935 Parliament passed an India Act, proposing a federation of the Indian provinces and autonomy of the individual provinces. This act went into effect in 11 provinces in 1937. But in 1939 the congress ministries in seven of these provinces resigned, leaving the country in such a state of anarchy that the Governor General was compelled to give all political powers to the appointed British governors in the various provinces until the end of the war.

Thus the government of India has reverted to a complete autocracy, an autocracy resting solely on the military might of the British Empire. All the political controversies that for several decades

had been gathering momentum have been outwardly silenced and confined by imperial fiat. But beneath the official lid this troublous broth will of course continue to seethe and ferment. Nothing is settled. The solution is merely postponed till the day of reckoning. The uncertainties, and the unpredictable outcome of this political tangle add one more heavy weight to the difficulty amounting already to near impossibility, of forecasting the productive power, trade and future foreign relations of India.

In China hope springs eternal even out of the most desperate situation. Seven years of continuous fighting automatically threw each individual upon his own resources. In most of the vast stretches of the country the fighting was of a guerrilla nature. Small groups of all classes of the population banded together for self protection. They set up all the necessary machinery of government in countless localities in the far west of China and even behind the Japanese lines of invasion. These self-governing groups, that often included foreigners, missionaries and others, received no help from the central Chinese authorities or outside sources. They had to be not only self governed, self protected and self fed and clothed but must also be mobile. The communities must be prepared to move on a few hours'

notice, bag, baggage and political machinery, to escape Japanese raiders.

In this rough and tumble experience they have learned how to govern themselves. Some of the political methods tried and tested under such severe conditions will probably be incorporated into the general pattern of government to be established in China. No controversies could be anticipated from such an outcome. These self-operated groups of people are simply modified forms of the everlasting village system of China. Moreover millions of Chinese have infiltrated into Malaya, Dutch East Indies and the Philippines where they will exercise an influence on the development of those lands.

The abandonment by the United States of the claim for extraterritorial rights in China and the repeal of the Chinese exclusion act have eliminated two moot subjects for political dissension while also softening some of the criticism leveled at us for not taking a more active part in checking the Japanese raids on the Burma road and in other parts of western China.

So far as India is concerned our participation in the world war has exercised no soothing effect upon the internal wrangles of that country. The most rabid anti-British spokesmen are prone to look upon our efforts as calculated chiefly to help

save and perhaps even extend the British Empire. Altogether too much is expected of us as a global police force and peace preservers. If we could serve all those purposes, the Dutch East Indies, the Philippines and the myriad South Sea Islands might dream lazily under the coconut trees, feeling that aggressor nations would henceforth be held in leash. But so far man has found no way to guarantee security. Not all men even want security. They want what the other fellow has.

If free to act, India and China can not be expected to adopt our moral, social, and political ideas. They are already revolting against them. Our patterns of living do not fit their system. The Orient insists that the idea of standardizing the whole world by the "American way of life" must be abandoned. Perhaps the Chinese way is better for China and the Hindu way for India.

As Jawaharlal Nehru has put it, "America has looked upon India as an appendage of Britain, and Asia as the dependency of Europe and America. You have thought in terms of benevolence toward these countries, but always with the taint of racial superiority. You have looked upon us as a benighted, backward people. But the people of Asia do not propose to be treated in that manner any longer. India and China constitute the mother country of the world. It is China and

India, with the experience of ages, who have learned the art of living decently without merely the material achievements of such living."

By no means have all Americans entertained such feelings toward the Orient. But it may be well to take note of the oriental interpretation of our actions in world affairs. It may help us better to understand the basis of some of the political dissensions that have stirred China and India so deeply.

XIII

INDEPENDENCE AND POLITICAL STABILITY

^ No useful purpose could be served within the limits of this volume by a rehearsal of the series of raids and temporary conquests by foreign tribes and alien armies to which India and China have been subjected during their long history. Their struggle for freedom and complete autonomy can be better understood when the picture is projected upon the screen of present day world politics.

For fifty years the Indian National Congress has sought independence of one form or another. At first the members of that body rather modestly asked to be admitted as a self-governing unit of the British Empire. But in recent years all possible variations of opinion have been put forth as to the final pattern of government for post-war India. The time limit for the preparatory stages in the process of transferring political powers to the native Indians has been the subject of much controversy, whether the desired change should take place gradually as Mr. Gandhi at first demanded or immediately and by a revolutionary uprising as the left wing advocated.

That the desire for freedom among all subject races and colonies is universal is no longer open to doubt. For five years while traveling almost continually in foreign countries I visited all the important colonies of European nations and talked with colonials about their reaction to rule by so-called "mother countries." I found no race or colony that enjoyed being ruled by any other race or colony. India, Burma, Straits Settlements and Malaya yearn to be rid of British control. Morocco, Algeria, Tunisia, French West and Equatorial Africa, Syria, Lebanon and Indo-China would welcome release from French rule. The Dutch East Indies would like to be allowed to handle their own affairs. Even Kenya with a substantial English population has expressed a desire to be free.

To argue that primitive races are incapable of setting up as good a system of government as that enforced upon them by the colonizing nations of Europe is quite beside the point. The usual reply I received to that argument was "We should greatly prefer to set up our own system whether it be better or worse than the European plan. Why are those nations so concerned about giving us a good government, good for what, for whom and how?"

The Koreans emphatically protest that the Jap-

anese regime in their country is for the benefit of the Japanese at the expense of the Koreans. The Chinese demand that in the peace treaty all their mainland territory, including Manchuria and Hongkong as well as Formosa, must be re-ceded to China. The whole world of Islam is insistent that Christian nations cease meddling politically in North Africa and the Near East. Burma had a system of government quite satisfactory to her own people before the British conquest of that country. Ethiopia fondly hopes to be freed from alien interference when the international weather clears. "The freedom of India" Nehru contends "must be the prelude to the freedom of all other Asiatic nations under foreign domination. Burma, Malaya, Indo-China, Dutch Indies, Iran, and Iraq must attain their complete freedom."

American missionaries of long experience in the orient practically all favor the independence of the colonies. Popular opinion and official native attitude speak for self-government of all peoples with even a moderate political capacity within as short a time as may be, and urge definite efforts on the part of colonizing nations to prepare colonies for independence. These missionaries mingle intimately with the common people and have sensed the rising discontent with colonial status

among the 500,000,000 people of southeastern Asia.

From Africa comes the voice of A. N. Orizu, a Nigerian. "We should think of Africa as a group of separate countries and not as a block of European property, calculated in terms of illiterate population easily available as cheap labor in a land yielding unlimited raw materials for use in manufacturing countries. West Africa wants independence. The people desire neither European sympathy, nor trusteeship, nor condominium, nor participation in some European system. They want freedom."

Scores of Hindus in speeches and written form have expressed similar sentiments. Even from the mass of emotional literature on this subject one might easily overlook the fact that while freedom is the primary desire of these peoples the kind of government they would establish, if free, might not be the parliamentary form in use among western nations. Hindus, Russians and Prussians have one characteristic in common. They harp upon the depth and originality of their mind as compared with that of westerners. Sanskrit is lauded as the highest linguistic achievement of the human race. Indian nationalism takes the form of a musing about the great soul or traditional mission of the people. "Nationalism lent itself," says Hans

Kohn, "to the embroideries of imagination, and the excitations of emotion. Its roots seemed to reach into the dark soil of primitive times and to have grown through thousands of secret channels of unconscious development, not in the bright light of rational political ends but in the mysterious womb of the people, deemed to be so much nearer to the forces of nature."

We are trying to build a nation on political reality in the present and for the future without too much sentimental regard for our origins in the past. But in India as in Germany the leaders are not contemplating a practical nation operating within its own geographic limits, but are too much intrigued by the old dream of world conquest and an empire of a super-folk and a deeper soul set apart from all eternity for their superiority.

Lord Minto clearly recognized this difference in mentality when he declared: "Representative government in the western sense is totally inapplicable to the Indian Empire, and would be uncongenial to the traditions of eastern peoples." "But," he immediately added, "the safety and welfare of this country must depend on the supremacy of British administration, and that supremacy can in no circumstances be delegated to any kind of representative assembly."

Few English ever realized the possibility of

adopting any other attitude toward India than that of teacher of British methods with nothing to learn from India. The notion of ruling India solely by appointed British officials was soon thrown out of the window and in its stead came the 1919 constitution originating in the British House of Commons, proposing "the gradual development of self-governing institutions with a view to the progressive realization of responsible government."

Now as the Governor of Bombay announced in 1928 "responsible government means one thing and one thing only—government on the English model, the fundamental feature of which is an executive responsible to a popular assembly, the members of which are in their turn responsible to an electorate."

Much of the controversy on the future of India has resolved about Mahatma Gandhi. Other Indian leaders both Hindu and Moslem have brought heavier political weapons into the combat notably Jawaharlal Nehru, Ali Jinnah of the All India Moslem League, Kalam Azad, president of the All India Congress and Rajagopalachari, a wealthy lawyer devoted to swaraj and to cooperation between the Hindus and Moslems. But Gandhi is a sort of patron saint and symbol of the mystic introspection of brooding India. His two

chief weapons have been the philosophy of non-resistance and fasting. In his repeated fasting periods in remonstrance against British methods he has often caused the British genuine worry lest he might carry the fast too far and die, thus, in public estimation, becoming a martyr to the cause of independence. His political propositions are often quite impractical and he is notoriously out of harmony with modern science. But he is unquestionably sincere, has generously given time and effort to the alleviation of the poverty stricken, to the development of home industries and especially toward softening the curse that for ages has rested on the untouchables. A sad lack of tact and a petty and most discourteous petulance were exhibited in an editorial in the July 1944 issue of an official British journal, Great Britain and the East, "The Congress party will have to face the truth that at 73 Mr. Gandhi is a very old man by Indian standards, and get rid of him and his creeds as decently as it can."

Official British spokesmen were for the most part firmly opposed to granting independence to India. Lord Lindlithgow when viceroy expressed himself as convinced that by themselves the Indians couldn't get along happily, that the Hindus and Moslems could never reach an agreement on any matter and that, if the British should with-

draw, India would disintegrate and chaos would settle upon the land for a century or more.

Naturally the establishment of a stable government would be no easy task. Some minorities are almost impossible to deal with, and India has three seemingly quite irreconcilable minorities—Brahmins, Moslems and untouchables. The vast Hindu majority often finds it difficult to prevent clashes between them. Gandhi, although in a previous outburst of impatience he had called for immediate rebellion, made a number of substantial concessions in a conference with Gen. Wavell, agreeing to support the war effort, and also yielding to the Moslem insistence on the system of Pakistan or separate Mohammedan provinces.

In a speech in the House of Lords in 1929 Lord Birkenhead, then Secretary for India, asked, "What man in this house can say that he can see in a generation, in 100 years, any prospect that the people of India will be in a position to assume control of the army, the navy and the civil service and to have a governor who will be responsible to the Indian government and not to any authority in this country?"

The Indian reply to such criticism is that it merely denies the likelihood that the Indians by themselves could build a facsimile of England in an oriental setting, and that is precisely what they

never would try to do except under compulsion. "India is struggling for an entirely different political structure and not just an Indianized edition of the present order." In a recent conference a British official promised, "Indians will share the opportunities of the British if they become like the British. They will receive European institutions as a reward for their progress in European knowledge," to which a Hindu interposed the query, "Is there no other knowledge?"

Perhaps it's unreasonable to expect that the West and East should understand each other. Educated Americans accustomed to all the conveniences, labor saving devices and luxuries that modern science and ingenuity have produced, are shocked to see the miserable hovels and total lack of comforts in which the Indian and Chinese peasants may live. But the shock is due to the fact that the American tourist tries to imagine himself living under those conditions, thereby shedding a flood of unnecessary tears. The peasant is fully inured through generations of experience to the environment in which he lives. We westerners have been prodded by envy of our neighbors and the incessant appeal of advertisers to want everything in sight and much more that is not in sight. The peasant hasn't had his wants artificially stimulated. He doesn't feel the lack of an electric egg

beaten any more than did our great-grandmothers. It would be unkind to him to induce him to want one. Life to him is as it has been for 40 centuries and he doesn't feel its inconveniences as might a cinema star from Hollywood. Thus in this matter the attempt in our excited imagination to think of ourselves as living in the Indian or Chinese peasants' circumstances merely results in a futile dither, which helps not at all in an understanding of the peasant.

Much of our concern about population pressure in the orient is needless. Warren S. Thompson has rightly called attention to that point in the annals of the American Academy of Political and Social Science. "Just as among individuals it is not generally those who are most poverty stricken who react most violently against what are believed to be the injustices of a social system, so among nations it is not the actual level of living, it is the felt population pressure rather than absolute pressure that makes a people dangerous to world peace. In China there is no widespread feeling of pressure of population. Poverty and subsistence levels of living are taken for granted."

Doctor Hu Shih in discussing the Haves and Have-nots points his finger in the same direction. "It seems quite clear that much of the talk about population pressure is unreal, and is entertained

only as a thin justification for territorial aggression." There is no evidence that war arises from an excess population. The Javanese have no notion of seizing land belonging to other peoples. Neither has China or India. Yet they are the most densely populated regions. More "cannon fodder" is what warring nations desire. But India teaches us another lesson on excess population in relation to migration. That emigration is not caused by excess population is evident from an official report of the Madras famine of 1776-78, one of the worst in Indian history. "Many previous emigrants returned to the famine district during the famine. Thus it will be seen that emigration has no foundation in an overplus of agricultural population or in the driving force by pestilence or famine. Sixty percent of the population of India are without the minimum necessities of life, and yet the migratory instinct does not exist in India."

When Gandhi in 1942 called for rebellion he and Nehru and about 48,000 persons in all were arrested, but the rioting persisted for six months. Spokesmen for the peasants insisted that India has lost national initiative under British domination and has not kept step with the progress in agricultural practice elsewhere, and that swaraj or independence would bring prosperity.

Could the standard of living in India be raised under native administration as a free people? I should emphatically say no, at least not for 25 to 50 years, and probably not at all unless many changes occur in the work-a-day life of the people. All sorts of superficial changes might take place. The air is already full of isolationist and separationist cries throughout India. Bengal, Bombay and Madras have talked secession and trying a separate political life. Schools with exclusive use of local dialects are proposed. Local and provincial prejudices, misunderstandings come to the fore. Such disintegrating forces would scarcely lead to anarchy and need not be greatly feared. But they would not conduce to prosperity.

These fluctuations in the political weather have been occurring for centuries without any noticeable effect on the fundamental structure of Indian society. High birth rate, over-population, poverty, illiteracy, unsanitary conditions, disease, famines, rigid caste system, religious tabus, high land taxes, usurious interest rates for peasants, never-ending fragmentation of land holdings, declining crop yields, use of dung for fuel and lack of employment during the annual dry season are conditions that have not been bettered by political agitations in the past nor can they be removed by mere legis-

lative flurries whether originating in the British Parliament or in a free Indian Congress.

So long as hungry people are out of proportion to the available productive acres and the number of job-hunters is too great for the available full-time jobs the standard of living among peasants and urban laborers cannot rise. At present the land holdings are split up into too small patches to provide a decent living for a farm family. Likewise city jobs for unskilled labor are split into two, three or four parts so as to spread the work among the oversupply of applicants for even a part of a real job. So long as this state of affairs persists I see no ground for the peasant and unskilled laborer to hope for better living conditions.

Nevertheless, gloomy as the picture must be painted if one is to be realistic, the situation would almost certainly improve somewhat if India were set absolutely free. The people of India are in a bad humor. Ugly feelings are manifest on all sides. In such circumstances futile wrangling rather than cooperation may be expected. Freedom has a magic appeal. It fires the imagination and stimulates to action. The spiritual impetus engendered by the mere idea of independence might lift the people out of the slough of despondency and set them into a different frame of mind. The natural resources of India have by no

means been exhausted. They have hardly been tapped. Forests, water power and mineral deposits await further development.

Ship building might take a spurt. "Indian shipping" says Walchand Hirachand "has been ruthlessly kept out of India's overseas trade, which has been allowed to continue as a practical monopoly of British shipping. India has today all the elements necessary to build a navy, enterprising ship owners, brave seamen, skillful ship builders. It is a matter of the deepest humiliation for us that shipbuilding in India was not considered a war effort, due to the anti-Indian policy of the British government and the hostile attitude of British ship owners."

Despair may be transmuted into hope or vice versa in the twinkling of an eye and even from very slight reasons. Freedom might create a new ambition to begin climbing the economic ladder. India may cease continually complaining that the British are destroying native institutions in a vain effort to make India British, or contrarywise complaining that, while the British have preserved law and order, by their rigid conservatism they have also preserved the social system that existed in India when they came 300 years ago and have thus prevented the country from throwing off the dead hand of the past and adjusting itself to chang-

ing conditions. In a happier mood India's millions might more easily endure the hardships of their over-populated existence.

The issues forced upon us by the world war have lent a new importance to the immediate consideration of the plight of China, India and colonial countries. This phase of the problem was clearly worded by Wendell Willkie in a statement issued in Chungking, "Without the real support of the common people the winning of the war will be difficult. The winning of the peace will be merely impossible. This war is a war for men's minds. We must organize on our side not only the sympathies but also the active spirit of nearly three-quarters of the people of the world, who live in the South Seas, Africa, eastern Europe and Asia."

The suffering and indignities heaped upon China by foreign nations have been similar to those experienced by India, but far more humiliating. The Mongols, who ruled China under Kublai Khan, treated the Chinese with surprisingly gentle consideration. But the Manchus were not content merely to rule. They ordained the cue upon the people as a badge of inferiority for 300 years. European nations, England, Germany, France, seized ports, took possession of so-called concessions in various Chinese cities, dictated un-

fair trade agreements and at one time had planned to partition China among themselves. Freedom to China means the right to be allowed to manage her own affairs and to have her rightful territory restored to the Chinese nation. The Chinese art treasures of incalculable value, of which they have been robbed by nations that posed as superior, may never be restored. They are scattered all over the world in the possession of those who carried them away to adorn their homes and museums in utter disregard of the rights of the Chinese owners.

Paul Martin, discussing the possible meaning of the Atlantic Charter asks "Who is to determine the composition of groups which shall choose their own forms of government?" Nearly all official promises of independence for subject races and colonies contain a joker stemming from contrary promises in treaties of long standing. This is particularly true in the case of India. When the British speak of granting some form of popular government to India, they refer only to the British provinces in India. The 562 Native States would continue to be practically independent principalities even if British India became free. But these principalities would still be under British protection.

King George V solemnly promised that "the integrity of the States should be preserved by per-

petuating the rule of the Princes, ever to maintain the privileges, rights and dignity of the India Princes who may rest assured that this pledge is inviolate and inviolable." And the Chamber of Princes in turn resolved "So far as independence affects British India only it is no concern of ours, but so far as it is likely to affect the whole of India we regard it as inconsistent with the treaties that bind us to the Crown."

Again at the round table conference in St. James Palace in 1930 Maharaja Bikanir stated "The Princes could only come into any united India plan by their own free will and on terms that would secure their treaty rights, preserving their safety for the future and their direct link with the Crown."

When it is recalled that the British provinces in India are interspersed among the Native States as in a game of checkers, and that these States would not be parts of united India, any promise of independence on that basis becomes a mere pleasantry or joke. In fact Col. G. S. Hutcheson has suggested that the provinces be converted into Native States under the rule of princes. Add to this charade or word puzzle the fact that Sir Stafford Cripps on his diplomatic mission to India brought no definite promise of independence or dominion status but merely a plan whereby India would be

granted the right under carefully specified directions to call a convention after the war for the purpose of drawing up a proposed constitution for India, which after due consideration by the British government would be accepted or rejected.

In this elaborate diplomatic shell game the Indians are given one guess on the shell under which independence is to be found. They are not satisfied with the plan and have repeatedly said in emphatic language that the movement for independence will continue. In an editorial in a recent issue of the Indian Cooperative Review it is announced that "India is determined to become free and play her proper role in the future world economy, and nothing can stand in the way of her achieving it."

Thus the prospects for real independence of China, India, Africa and all colonial peoples are left hanging in the balance, weighted down by an array of very serious uncertainties. Sir Oliver Stanley, British Secretary of State for the Colonies referring to the south Pacific area has stated that in that region "no idea can be formed of what the conditions will be when we reoccupy." And Mr. Churchill has proclaimed that "the colonies must remain the sole responsibility of Great Britain."

Will those lovely ideals of democracy and universal freedom, preached in official propaganda

and heralded from every forum and pulpit and broadcasting station find a friendly welcome at the peace table?

In the days of the "underground railroad" when slaves were escaping into the Northern States and Canada by clandestine routes, the deep-seated yearning for freedom was often voiced in the chants of native negro origin. One of these chants carried the refrain "let my people go." Today that prayer is rising ever more fervently from the lips of colonial populations throughout the world. It has become more than a prayer. It takes the form of a demand. How long can these peoples be coddled with mere lists of the various kinds of freedom when what they are clamoring for is the freedom to be free?

XIV

WHERE THE EAST FACES WEST

The Philippine Islands lie in the Orient, but the Filipino people are occidental. That is only one of the unique and paradoxical features of the lovely archipelago of 7,000 islands that in 1946 will be become a full-fledged independent member of the family of nations, a republic with essentially the same political, educational and religious institutions as those of New York or California, an occidental republic in an oriental setting, the only one of its kind and the only Christian country in the Orient.

The development and present attitude of the Filipinos may readily be traced step by step in their historic evolution during which a mixture of aboriginal and oriental races was fused into the modern Filipino. The roots of his ancestry run back into India, China, Borneo and Java. From those countries came a variety of religious cults—Hinduism, Buddhism, Mohammedanism, Confucianism, Shintoism and various animistic practices of fetishism and nature worship. Not alone the lares and penates were brought along with the

household goods but also the family and tribal habits, customs and traditions. And yet today the Filipino is more occidental in his outlook and habit of thought than is the Roumanian or Russian, while still unquestionably to be classed as a Malay in his physical structure.

•In the first place religious indoctrination plainly exercised a large influence in turning the Filipino's face to the west. I have observed Malays in Indo-China and Straits Settlements under Buddhism, in Java under Mohammedanism and in the Philippines under Christianity, and of all the Malays the Filipinos to my mind are tops.

When the waves of invading Indonesians and Malays that blended into the Filipino of today surged upon the Islands under the driving force of the migratory instinct, the aborigines fled to the mountains leaving the fertile valleys to the invaders. The Hindu and Buddhist cults which the newcomers carried with them gradually degenerated into a tenuous system of half-hearted observances. When the advance agents of Islam appeared, looking for new worlds to conquer, they experienced little trouble in dispelling the fetishes and anemic divinities of the Sulu Archipelago. By their militant campaign of proselyting they would probably have converted the whole chain of islands

to Mohammedanism if the Spaniards had not appeared on the scene.

The Sulu group of two or three hundred islands still renders allegiance to Allah. In no Mohammedan country has the Cross made much headway against the Crescent. Islam is still a vigorous, fighting religion. But the early Spanish priests were equally aggressive and militant. They prevented the expansion of Islam beyond the Sulus, and soon spread Roman Catholicism over the rest of the Philippines.

The significance of that simple fact is too often quite overlooked in attempts to account for the present trend of Filipino thought. In the 400 years since Spain conquered the Philippines the people have become thoroughly occidentalized, and today 90 percent of them are Christian, as a result of 350 years of Spanish discipline and 50 years of American activities. For contrast look at India. Four centuries ago the Filipino was no less oriental than the Hindu in religion, traditions and habits of thought. The Filipino and Hindu differed chiefly in external racial appearance. But 400 years of European domination in India, 300 of those years under the British, have been merely another 400 years of Indian history without much apparent change in the religion or habits of the people. Today Hinduism is the religion of 70

percent of the people of India, while Islam claims 24 percent and Christianity only one percent, leaving five percent to be divided among various non-descript forms of nature worship.

In their contact with the Spaniards the Filipinos not only relinquished the slender attachment that held them to the vague and irrational ceremonies of a degenerate Hinduism and adopted readily the vigorous, positive type of Christianity promulgated by the Spanish priests, but at the same time and quite naturally the habits, customs, festivities and games of tribal origin were gradually modified, blended with church fetes and took on a distinctly Christian character. Villages and not scattered homesteads were the rule in rural sections, originally for better protection but later for social reasons. And presently festivals of patron saints were held by the Filipinos, as well as church processions, street parades, open air theatricals, dancing, music and other amusements and all of occidental nature. Christenings, weddings and funerals were conducted as in western countries.

A Filipino woman sociologist, Dr. Paz Mendoza-Guazon, has recorded her observations on the profound effect exercised by Spaniards on the Islanders, not only in religion but in laws and customs. "The priests encouraged the reading of the lives of saints and of Christ and of the novenas,

but discouraged girls from writing because they might correspond in secret with the male sex. The Christian Filipino woman holds a very different position in the family from that given to her sisters in India and other oriental countries. She is usually the business manager of the household, keeps the keys and makes up the budget."

Under the Spanish regime women were not to appear on the street unaccompanied by a duenna or male friend. But even that restriction soon disappeared with the advent of the Americans. Such freedom is a long remove from the usual oriental attitude toward women as has been well phrased by E. A. Ross. "To orientals the natural inferiority of females is self-evident. If a woman attains to dignity and respect, she is either the darling of a hero or mother of sons. In a word her value is but the reflection of her importance to the precious male."

Monogamy was the rule even among the early Filipinos. Among those of Malay origin the duty was enjoined upon mothers to teach sex hygiene to their daughters. Husband and wife shared in the work of the household and in authority over the children.

This western way of thinking has developed and taken firm root in a wholly eastern soil and environment. Manila is not like Seville or Cin-

cinnati, nor does a rural village in Luzon resemble a country town in Kentucky. An aura of the tribal past from the dim ages of the orient broods over the Philippines. In the Manila harbor are to be seen in juxtaposition a strictly modern pier and bamboo outrigger canoes such as have been used by the natives for the past two or three millennia. Motor tractors and trucks jostle with carabao carts and native porters toting baskets slung from bamboo rods. By a sort of telescoping of time the centuries overlap one another. Tribal dialects, handed down from far off ages are spoken side by side with English and Spanish. In the mountain provinces animistic beliefs and the crudest forms of fetish worship may cohabit with Christianity and Hinduism. But notwithstanding these ancestral holdovers from the changeless East the people are facing West and their lot is cast with us.

The conversion of the Filipinos to Christianity is genuine and unquestioned. It's not mere politeness or lip service as is often the case with the Indian population of Yucatan and other parts of Mexico. From his experience in the Islands William Howard Taft testified "Ninety percent of the Christian Filipinos who do not speak Spanish are really Christians. They have no castes or customs which prevent their development along the lines

of Christian civilization. They are glad to follow European and American ideals."

Up to 1899 Church and State were united in the Philippines and education was directed by the Catholic Church. When the United States took control of the Islands Church and State of course had to be independent of each other. The separation came about gently and with forbearance and tolerance on both sides. After 400 years of Spanish rule it was a profound change but was accomplished with a minimum of disturbance. The Filipinos are well endowed with common sense and are not unduly emotional.

The Spanish priests fought against the change and could not adjust themselves to the situation. Most of them, perhaps a thousand or more, left the Islands and were replaced by Filipino priests and others from Europe and the United States. A prominent Filipino priest, Gregorio Aglipay, withdrew from Roman Catholicism and established about 40 years ago The Philippine Independent Church, with a present membership of 1,500,000, in response to a demand of many Filipinos for freedom from Rome. This church is specifically and aggressively nationalistic in spirit. In doctrines it differs only slightly from the Roman Catholic but Bishop Aglipay is sympathetic to some of the Unitarian ideas.

Spain had thus given the people religion but had organized no system of primary education for the mass of the natives. The Spanish had little interest in general education particularly for women. In 1903 only 20 percent of the population could read and write and not over five percent had command of the Spanish language.

• That's where Americans began to put the finishing touches on the westernization of the Philippines. In the early period of the American regime our soldiers taught the natives the English language and the principles of our government. That seemed to be just what the Filipinos were hungry for. They took to American schools like ducks to water. From that day forward education advanced by leaps and bounds until at the time of the Japanese invasion there were two million Filipino children in public schools, conducted about as efficiently as those in the United States.

The rapid progress of secular education had to face considerable antagonism and differences of opinion on the relationships between public and parochial schools. Catholics at once began intensifying their activities in the development of church schools and have thereby gained greatly in influence. There is a wide-spread feeling in the Islands that a vigorous, almost militant religion may be necessary for the maintenance of high ethical

standards. Otherwise the people might slip back into less desirable practices in worship.

The problem of teaching religion in the public schools was thus forced upon the attention of the authorities. The Catholics contend (and their position is strengthened by the poorer classes who can't afford private schools) that public schools offer far too little religious training. Courses in character building are not enough, they argue. Courses in religion are already offered in many public schools, perhaps a thousand, and some 200,000 pupils are taking these courses.

Thus this embryonic nation, so fortunately nurtured for centuries in the womb of time will come upon the scene full formed and proportioned as did Minerva from the head of Jove. The Filipinos have been preparing for the natal event, especially during the past 40 years. Legislature, courts of justice, legal machinery for the administration of national, provincial and local affairs, research institutions for the advancement of agriculture, mining, medicine and education are all properly lubricated and in running order. When a Filipino president takes Uncle Sam's place at the wheel on July 4, 1946, there is every reason to believe that the Philippine ship of state will continue on an even keel without a shiver of uncer-

tainty, it being taken for granted that Japan will be prevented from committing further piracy.

In order to start out fully accoutered in the parade of nations the Filipinos have settled in advance the problem of a common written and spoken language. Some 70 or more dialects have been recognized in the Islands but they may be simmered down to eight or nine tongues of major importance. Fortunately these are so similar in structure as to be mutually understandable without too much difficulty. In 1936 a National Language Institute was established to select and develop a national speechform based on existing dialects. In 1937 Tagalog was recommended and proclaimed. Three years later a grammar and dictionary of the chosen language were ready, and Tagalog was declared by act of the legislature as the national language, effective July 4, 1946.

At present about 4,000,000 Filipinos speak Tagalog, another 4,000,000 English and a smaller number Spanish. So many of the rising generation of Filipinos learned English in the public schools that beyond question it will continue to be used widely and, probably, increasingly. English is and will remain the lingua franca of the Orient. As such there seems to be no chance of its being displaced.

Adding all these considerations together, the

summation proclaims unmistakably that in the Philippines the East has met the West on equal terms, and that to the Filipinos western ways and western ideals present the more hopeful and inspiring prospect to an alert, ambitious people. The Filipinos have been loyal to Americans to the death in the war with Japan, in striking contrast with the natives of Java, Malaya, Burma and Indo-China. The Filipinos understand us and trust us and that faith is more precious than all the rubies of the Princes of India.

When peace is reestablished and normal trade and diplomatic activities are resumed, Manila may become an international broadcasting station for spreading an understanding of the West among the peoples of the East. If so our forty years' tutelage of the Filipinos will bear rich fruit indeed.

INDEX

Africa and freedom 266
Agricultural education 109
Animal husbandry, need of improving, 228
Aable land for food production, 188
Asiatic farmers 15 10
Aztecs, castes among, 66

Baalbek temple, 148
Beriberi, 220
Birth rate in India, 38
Books and other writings in early India and China, 101 105
Brahma, worship of, 53
Brahma cattle, 30
Brahmin caste, 61
Brahmin priests, 54
Bristles, trade in, 246
British, controversies with Indians, 268-271
British in India, 257-259
Buddhism in China, 11
Buddhist mendicants, 58
Buddhist, scriptures in stone, 105
Buffalo in India, 30
Bulletins, useless among the illiterate, 107
Burial mounds in China and Korea, 208
Burma Road and trade, 233
Burning ghat in Benares, 89

Caste, breaking of, 69
Caste, system in India, 63

Castes and contamination, 71
Castes and factory workers, 72
Castes and food tabus, 73, 71
Castes and labor unions in U.S. 77, 78
Castes and snobbery, 70, 71
Castes and occupation, 67
Castes and religion, 48
Castes and social activities, 68
Castes based on incident of birth, 66
Castes in China, 84
Cattle in India, 30
Charka, uses of, 151
Chaulmoogra oil in China, 20
Chiang Kai shek, 255
China, early history of, 16
China, 4000 years of soil fertility, 128
China, illiteracy in, 101
China, post war politics in, 259
China, trade with, 232-218
Chinese coolies, 40, 41
Chinese coolies, life of, 250
Chinese farmers, skill of, 196
Chinese language, simplification of, 118
Chinese, religious tolerance, 12
Christianity among Filipinos 287
Christianity vs Buddhism, 62
Cleanliness among Hindus, 88
Climate and vitamins, 216, 217
Climate, effect of in India, 36
Coal, early use in China, 18
Colleges in China, 121
Colonial problems, 240, 243

Compost use in China, 129
 Confucianism, 19
 Confucius and education, 61
 Coal in China, 10
 Cooperatives and caste, 80
 Cottage industries 21, 35, 36
 Cow dung, as fuel 181
 Crop land, possible increase, 153
 Crooked stick plows, 151

Demonstration farm, 111
 Diet in China, 98
 Diets in India, 215
 Diseases in China, 97
 Dissensions and progress, 219
 Doctors in China, 96
 Droughts in India, 211

Last and West, was Kipling right?, 271, 282, 292
 Education, 102
 Education in Philippines, 289
 Education, out of reach for the poor, 110-111
 Educational methods in India 106
 Egypt, castes in, 69
 Ephedrine in China, 20
 Erosion control on tea plantation, 186
 Erosion in India, 132, 136
 Erosion in Indo China, 189
 Extraterritoriality in China, 268

Family as basis of civilization, 180
 Famines, 211-231
 Famines in China, 223
 Farm experiments in China, 120
 Farm paper, first in China, 101
 Farmers of Asia, 15-40
 Farms, 5-acres or less in China 26

Farms size of, 193
 Farms sub-division of in India 27
 Filipino, racial ancestry 282
 Fish in the Diet 220
 Fertility loss from monsoon rains, 27
 Fertilizer, use in China, 21
 Food crops, 186 210
 Food distribution 211 231
 Food, plums for increasing 198-201
 Food vs cash crops 188 190
 Foods, nutritive variation in 215
 Forests and erosion, 138
 Freedom and standard of living 274
 Freedom, city of in Orient 261
 Freedom, impetus to action, 276
 Fuel in China, 21
 Funeral ceremonies in China 181

Gandhi and the outcasts, 75
 Gandhi, theory of education, 112
 Ganges, bathing in 89 90
 Golden Age and soil conservation, 121
 Grass and erosion, 138
 Grasshopper plagues, 225
 Great Wall in China, 116 119
 Green vegetables, need of, 216
 Gut in India, 205

Hand spinning, 154
 Hand labor, 145 165
 Handicrafts in India, 158
 Hatch, Dr D S and caste, 80-81
 Haves and Have-nots, 272
 Herb doctors in China 96

Himalayas, villages in 168
 Hindu utopias, 59
 Hindus vs Moslems, 255
 Hinduism, 51 52
 Human in bucket chains 115
 Human excrement as fertilizer 129
 Illiteracy, 102 103
 Illiteracy among farmers 105
 ~ 104
 Illiteracy and disease, 91 96
 Incas, castes among, 66
 Independence of the Orient 263 281
 India, Act of 1919, 257
 India and autocratic government, 267
 India and Nationalism, 266 267
 India, early history of, 16
 India, religion in, 18
 India, trade with, 232 248
 Indian National Congress, 263
 Industrialization in China, 157
 Industrialization of Orient, 239
 Investments in the Orient, 238
 Islam and Christianity, 265
 Jataka tales in India, 51
 Joss in Chinese religion, 43
 Jute from India, 214
 Kaoliang in China, 210
 Karma, doctrine of, 51
 Korea and freedom, 261
 Kshatria caste, 61
 Kuomintang, 251
 Lac, trade in, 211
 Lamasism in China, 16
 Land holdings and famines, 239
 Latrines and Caste, 82
 Latrines for animals in China 113
 Life expectancy in India 38
 Local industries, 21
 Lowdermilk, Dr W. C. on soil erosion, 181 185
 Millets 283
 Malnutrition in India, 202
 Manure, use as fuel in India 28
 Markets and the village system 177
 Milk deficiency in India, 202
 Milk yield of India in cattle, 81
 222 224
 Missionaries in China, 47, 251
 Mohammedanism in China 16
 Monsoon season, 37
 Mortality, rate in India, 38 39
 Moslems and fatalism, 87 88
 Moslems in India, 255
 Moyer, Dr R. T. on erosion 140 143
 Nationalism, and trade, 236
 Native wild plants as food, 225
 226
 Nehru, Jawaharlal, 261
 Nirvana, 51
 Occidental attitude of Filipinos, 284
 Occupation and caste, 67
 Outcasts, 71
 Oxcarts in China, 116 158
 Oxen in India, 35
 Pakistan, 270
 Panchayat village fathers, 174
 Parias, 71
 Part farming in India, 160
 Pastures in India, 30, 222
 Peace and trade 217

Peasants in India, 33
 Peasants and politics, 203, 201
 Pellagra, 220
 Philippine Independent Church, 288
 Philippines, 282-292
 Philippines, liaison of East and West, 231-235
 Plantation crops, 186-210
 Plowing, 151
 Plowing festival in Siam and Yucutan, 123-124
 Political dissensions, 249, 262
 Politics in China, 252
 Population pressure, 241, 272
 Poultry breeding in India, 81
 Poverty and disease, 91-92
 Poverty of the ryots, 162
 Printing in early China, 18
 Purdah in India, 108
 Purification ceremonies, 71
 Radio program in China, 119
 Rainfall and food, 192
 Rainfall in India, 37
 Rations, deficient in cities, 218
 Rations in India, lack meat, milk and eggs, 217
 Rebellions in India, 273
 Rebirth, doctrine of, 50
 Reincarnation in India, 51
 Religion and daily life, 42
 Religion, comfort of, 61
 Religions in Philippines, 283
 Religious debates in India, 55-56
 Religious dissensions, 249-262
 Religious pilgrimages and disease, 89
 Religious sects in India, 255
 Religious tolerance in China, 251
 Rice deficit in Bengal, 212
 Rice in China, 207-208
 Rice production, decline of, 189
 Ryots in India, 33
 Sanitation and disease, 87
 Schools in Philippines, 290
 Seasonal rains, 160
 Ship building in India, 276
 Soda, importance of, 127
 Soil constituents, 126
 Soil culture in China, 22
 Soil erosion in China, 133
 Soil physics, 127
 Soil worship vs sun worship, 144
 Soils, 123-144
 Soong, Dr. T. V., political activities, 253
 Soybeans, 26
 Spaniards in the Philippines, 280
 Sudra caste, 61
 Sugar production in India, 205
 Sulu Islands, 281
 Sun Yat Sen and education, 116
 Sun Yat Sen's fundamentals, 252
 Tabus, in India, 60
 Tagalog, Filipino National language, 291
 Tamped earth structures, 146
 Tea in China, 206-207
 Tea production in India, 206
 Temples, tabu to outcasts, 76
 Territorial aggression and war, 273
 Thompson, Warren S. on population pressure, 272
 Trade with China and India, 232-248
 Tuberculosis in India, 96
 Tung oil, trade in, 245
 Unemployment, 163-164

Untouchables and religion, 60
Vaccination in China, 100
Vaisya caste, 61
Village near Shanghai, 22
Village population, 21
Village system, 166-185
Villages and world competition, 177
Villages, change occurring, 183
Villages in China, 178-185
Villages in India, 168-178
Vitamins in food, 216-217
Wardha plan of education, 112
Waste, avoidance of, 201
Weddings, ceremonies in, 180
Wei River erosion in China, 110
Western nations in Asia, 236-237
Wheat consumption in China, 197
Women, illiteracy of, 108, 114
Women, status in Philippines, 285
Wood oil, trade in, 215
Yellow River, China's sorrow, 134, 135
Yen, Dr. W. C. J. educational system, 118
Yields of crop decline in India, 132
Zebu, 30

